

**SPECIFICATION FOR OUTLET UNITS FOR MASTER AND  
COMMUNITY TELEVISION ANTENNA SYSTEMS**

**AMENDMENT NO. 1**

November 1990

1. Page 5

(a) Subclause 1.1

*Amend* the frequency range "40 MHz to 960 MHz" to "40 MHz to 860 MHz".

(b) Subclause 1.2

*Refer* to Figures 4 to 7 of this amendment which show the different typical types of outlets and wiring systems.

2. Page 6

(a) Subclause 3.11

*Amend* the subclause to read as follows:

**"3.11 Insertion Loss.** The amount of loss that the outlet adds to the signal distribution line in which it is installed."

(b) Subclause 3.15

*Include* Subclause 3.15 which is read as follows:

**"3.15 Double Tee Outlet.** It is a double outlet unit with a built-in Tee unit and is designed for Tee-wired system (loop-wired formation)."

3. Page 7

(a) Subclause 6.2.1

*Amend* the dimensions of the outlet plate "82.5 mm x 82.5 mm (nominal)" to "either 82.5 mm x 82.5 mm (nominal) or 82.5 mm x 62.5 mm (nominal)."

(b) Subclause 6.4

*Include* as a last paragraph in the subclause the following sentence:

"For the Double-tee outlets and other types of outlets with a termination base, the outlet units should be linked to the coaxial termination base by means of plug and socket coaxial connections."

4. Page 12, Table 1

*Replace* Table 1 with the new table in this amendment.

5. **Page 13, Table 2**

*Replace "960 MHz" with "860 MHz".*

6. **Page 13, 14 and 15; Subclauses 8.3, 8.4 and 8.5**

*Include after Subclause 8.5 the following:*

"Note: A sweep generator method of measurements can also be used as an alternative method for the measurements of Insertion Loss, Mutual Attenuation and Variations in Side Loss."

7. **Page 14**

(a) **Subclause 8.3.3**

*Include Subclause 8.3.3 which is read as follows:*

"8.3.3. Compliance to the insertion loss requirements of this standard shall also be applicable to other frequencies within the frequency range of 40 MHz to 860 MHz and not specified in Table 2."

(b) **Subclause 8.4.7**

*Include Subclause 8.4.7 which is read as follows:*

"8.4.7. Compliance to the mutual attenuation loss requirement of this standard shall also be applicable to other frequencies within the frequency range of 40 MHz to 860 MHz and not specified in Tables 2 and 3."

(c) **Table 3**

*Replace "960 MHz" with "860 MHz".*

8. **Page 15, Subclause 8.5**

*Amend the subclause to read as follows:*

"8.5 **Variation in Side Loss.** The variation of the side loss is measured at the frequencies indicated in Table 2 and also other frequencies within the frequency range of 40 MHz to 860 MHz and not specified in the table. The side loss is dependent on the manufacturers' designs but an increment of 3 dB is recommended".

Table 1

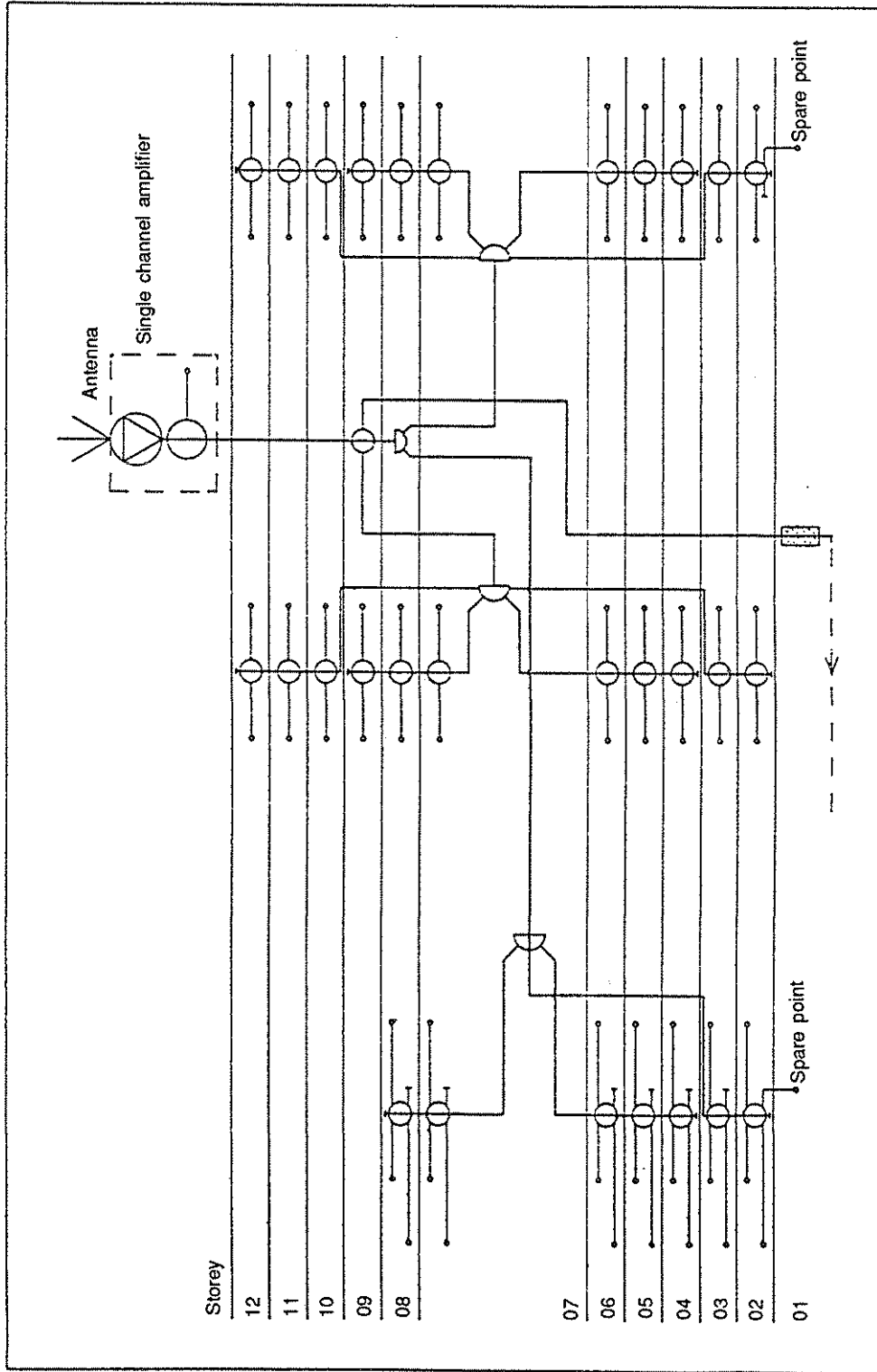
Type	Description	System application	Insertion loss		Side loss		Mutual attenuation			Variation in side loss	Return loss at input & output
			TV	FM	TV	FM	Between TV & FM sockets of same outlets	Between TV & FM sockets of different outlets	Between TV & TV sockets of different outlets		
a) Single outlet	1 TV or 1 FM socket	Tee wired	-	-	< 1.0dB	< 1.0dB	-	-	-	-	-
b) Single outlet	1 TV or 1 FM socket	Loop wired	< 1.5dB	< 1.5dB	*	*	-	-	-	-	Band I - III : < ± 1.0dB Band IV - V : < ± 1.5dB
c) Double outlet	1 TV & 1 FM socket	Tee wired	-	-	< 1.5dB	< 2.0dB	Band I : > 25dB Band II : > 10dB Band III - V : > 30dB	Better than 46dB	Better than 33dB	-	Band I - III 17dB or better Band IV - V 12dB or better
d) Double outlet	1 TV & 1 FM socket	Loop wired	< 1.5dB	< 1.5dB	*	*	Better than 33dB	-	-	-	Band I - III : < ± 1.0dB Band IV - V : < ± 1.5dB
e) Double tee outlet	1 TV & 1 FM socket (loop formation)	Tee wired (loop formation)	< 2.0dB	< 2.0dB	< 2.0dB	< 2.0dB	Better than 30dB	-	-	-	Band I - III : < ± 1.0dB Band IV - V : < ± 1.5dB

**Notes:** 1) Return loss at the input is measured with reference to a non-reactive 75 ohms resistance when the output is also terminated in a non-reactive 75 ohms resistance.

2) Return loss at the output is measured with reference to a non-reactive 75 ohms resistance when the output is also terminated in a non-reactive 75 ohms resistance.

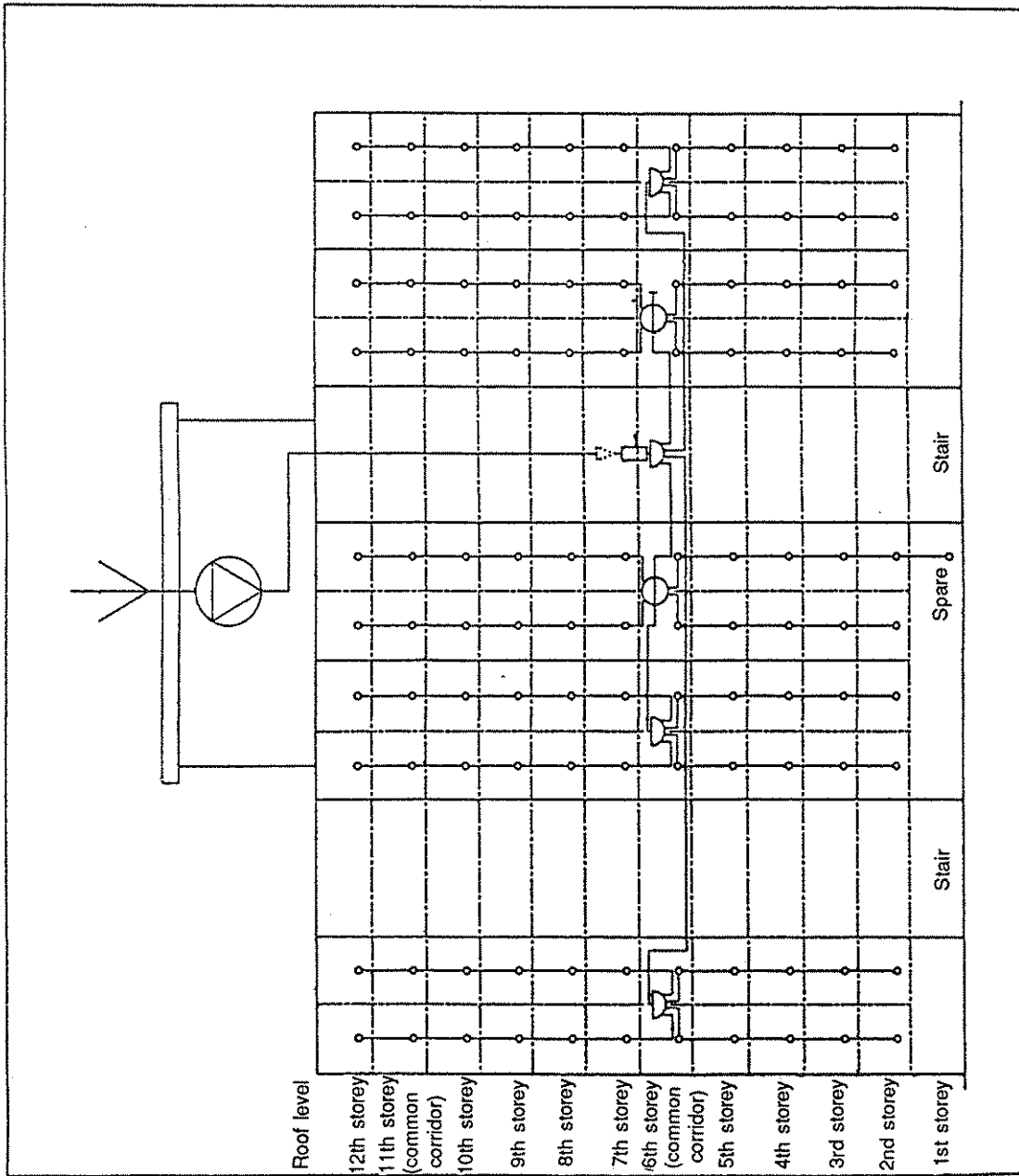
3) The side loss at the FM sockets may be 5dB higher than the TV sockets for locations where the FM signals are very strong.

4) \* denotes values which are dependent on design.



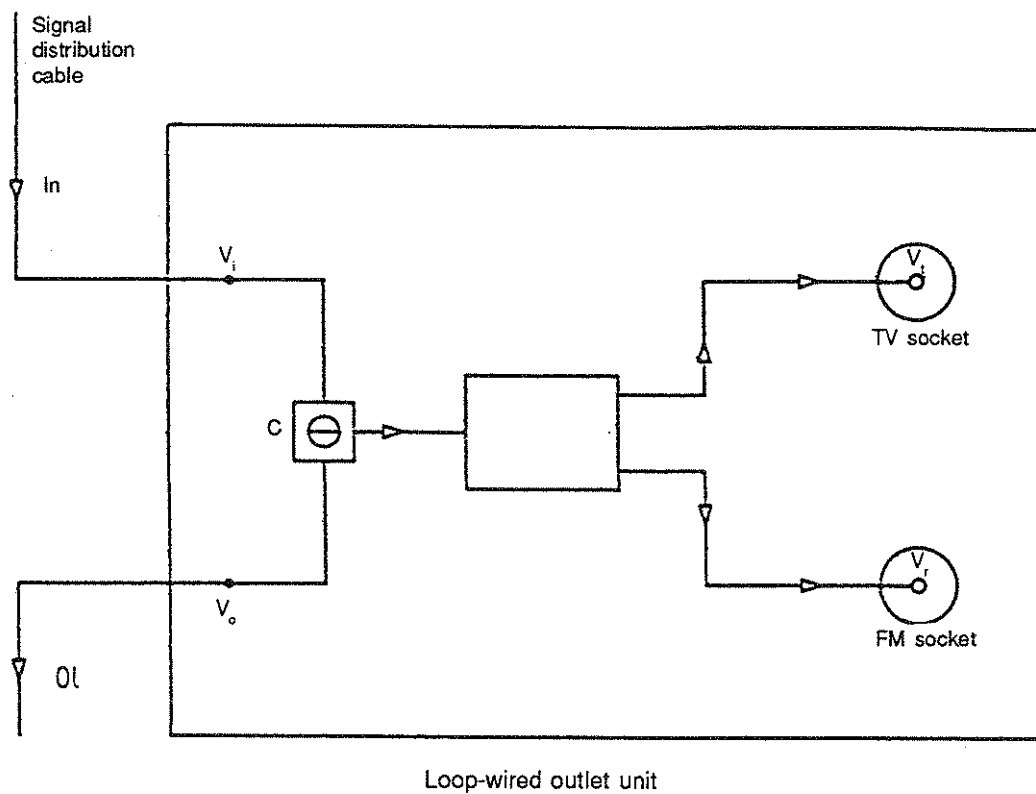
Legend  
Refer to Figure 5

Figure 4. Typical tee-wired system



CATV legend	
	Television antenna
	Head end amplifier
	Two way splitter unit
	Three way splitter unit
	One way tee unit
	Two way tee unit
	Four way tee unit
	Direction of signal
	Co-axial-cable
	Broad band amplifier
	Underground cable
	Termination

Figure 5. Typical loop-wired system



- Notes:
- $V_i - V_o$  = Insertion loss
  - $V_i - V_t$  = Side loss of TV signals
  - $V_i - V_r$  = Side loss of FM signals

where:

- $V_i$  = Signal level at input terminal of the outlet unit
- $V_t$  = Signal level measured at the TV socket
- $V_r$  = Signal level measured at the FM socket
- C = Cable connector
- $V_o$  = Signal level at output terminal of the outlet unit

Figure 6. Insertion loss and side loss

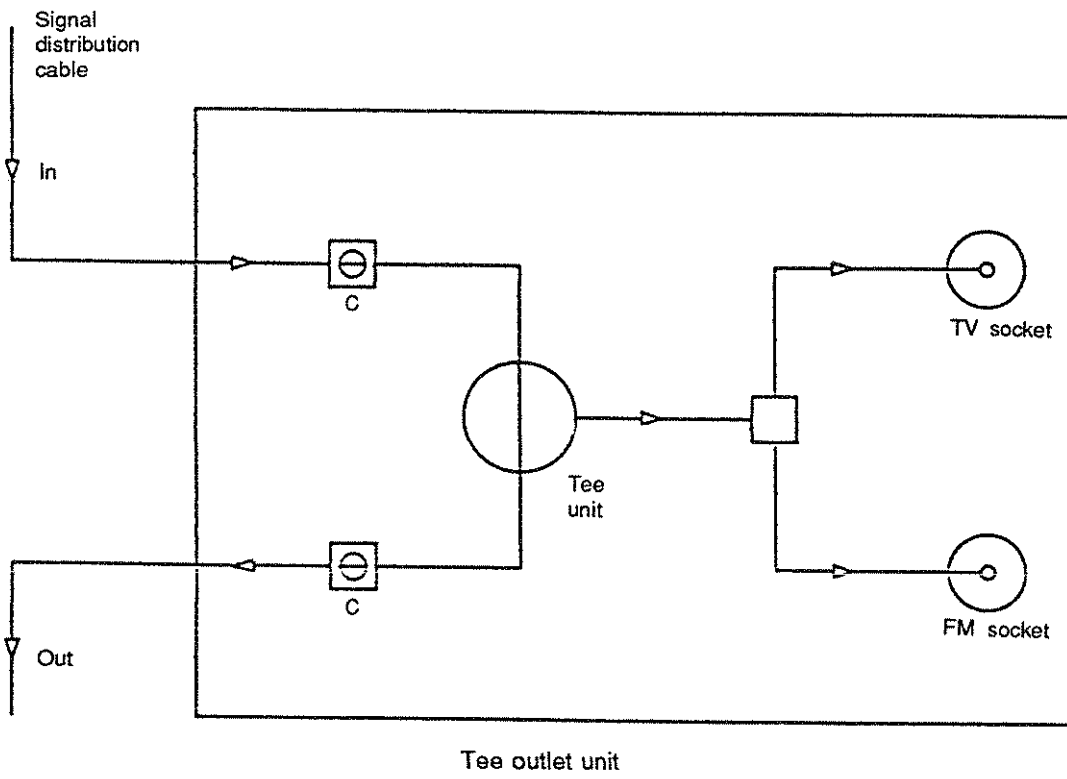


Figure 7. Tee outlet unit

