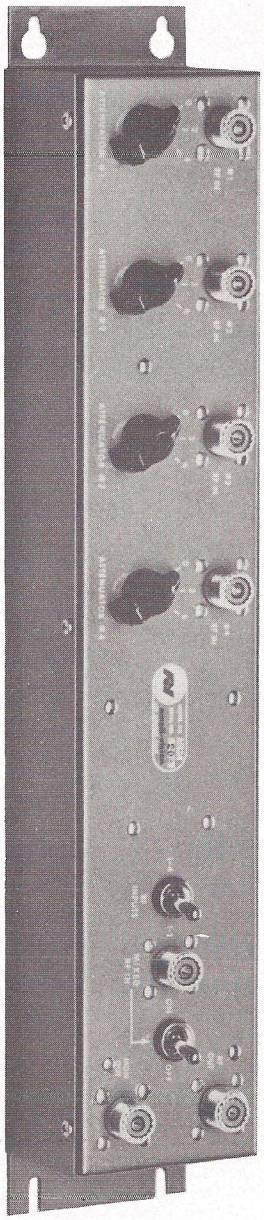
the M-4 mixer unit



features:

* High isolation between inputs.
* Switchable attenuators in four of the inputs provide 0-3-6 db of attenuation, allowing convenient adjustment of levels.
* Low insertion loss.
* Special switches permit lowering the insertion loss if there are no more than 2 inputs or if there is no input from another mixer.
* No tuning necessary.
* Require no power.
* Monitor jack for measuring output levels.
* Flat frequency response from 54 to 216 mc.
* Fit the standard 19 inch rack.
* Have 75 ohm input and output impedances.

uses:

* As a mixer, combines the outputs of up to five channel amplifiers in one line with high isolation between inputs.
* As a splitter at a system sub-station, separates the signal on each system channel for amplification in channel amplifiers.

ampli-vision

a division of The International Telemeter Corp., 2000 Stoner Avenue, L.A. 25, Calif.

the M-4 mixer unit

description:

At the head end of an Ampli-Vision community TV antenna system, the output of each channel's antenna will be amplified in a channel amplifier. The outputs of the channel amplifiers will then be fed to the input terminals of the M-4 Mixer. From there the signal will be coupled to the transmission line for amplification in broad band amplifiers at repeater stations.

Purpose of the mixer is to combine RF signals in one line while preventing undesired coupling between the output circuits of channel amplifiers. Therefore, one of the desirable features of mixers is high isolation between RF inputs. The M-4 provides between 15 and 25 db of such isolation on the low VHF band and between 12 and 17 db on the high VHF band.

Each M-4 has five RF input terminals. Four of these have self-contained step attenuators in series with them. One purpose of the fifth terminal is to accommodate the output of another M-4 mixer. With two M-4 Mixers, up to 8 channels can be combined in one line. Each Mixer contains a Monitor Jack for measuring output signal levels.

Two switches on the mixer unit make it possible to lower the insertion loss when there are no more than two inputs or when there is no input from another mixer. The first of these switches disconnects 3 and 4 when these are not needed and the second disconnects the fifth terminal, labelled *Mixed RF In.*

The purpose of the 0-3-6 db step attenuator in four of the RF input circuits is to equalize channel levels in the system. The Ampli-Vision channel amplifier has a vernier control which permits a continuous adjustment of output levels between the positions of this step attenuator. The combination of the two units makes it possible to handle all level setting problems likely to be encountered in the usual system.

At a sub-station, the M-4 Mixer may be used as a splitter. In this application, the input lead is connected to the RF out terminal of the M-4 and the RF in terminals are connected to the input terminals of channel strips.

specifications:

RF INPUTS:
5 (4 with attenuators; 1 without).

RF OUTPUTS:
1

INSERTION LOSSES:
(These depend on "RF Inputs" and "Mixed RF In" switch settings.)
These figures are for 54-88 and 174-216 mcs.

SWITCH SETTINGS		Insertion Losses -db	Available Inputs
"RF Input"	"Mixed RF In"		
"1-2"	"OFF"	3.5 ± .5	2
"1-4"	"OFF"	7 ± .5	4
"1-4"	"ON"	10 ± .5	5

MINIMUM ISOLATION BETWEEN INPUTS:
54-88 mc 15 db
174-216 mc 12 db

ACCURACY OF ATTENUATOR PADS:
3 db ± .5
6 db ± .5

POWER REQUIREMENTS:
No power is needed for the M-4 Mixer.

TUNING:
The M-4 needs no tuning.

FINISH:
Strato-blue baked metallic enamel

DIMENSIONS:
3¼" Wide x 3⅛" High x 19" Long

SHIPPING WEIGHT:
75 lbs.

MOUNTING:
Standard 19-inch rack.

Designed by men in the community TV antenna system field, AMPLI-VISION equipment provides trouble-free, low-loss transmission and distribution of VHF TV signals. Before being released to the market, all AMPLI-VISION components are field tested in our actual system under severe operating conditions. Only products which pass these tests ever reach the public.

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