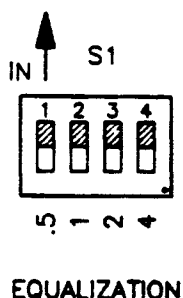


Addendum: 9908A Active Slope Equalizer Subassembly

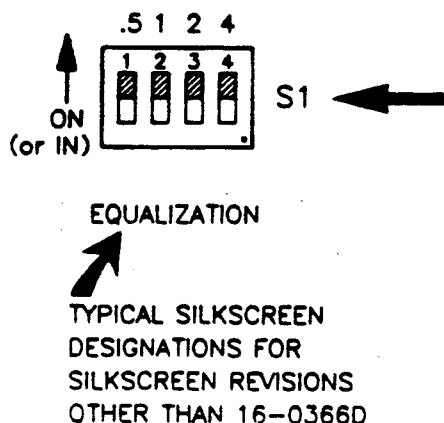
1.01 This addendum to practice section 829908, revision A, provides information on a printed-circuit-board silkscreen error on Issue 2 9908A Active Slope Equalizer subassemblies (Tellabs part number 829908A) built from March of 1986 to March of 1988. These subassemblies can be identified by the silkscreen revision number 16-0366D below the Tellabs logo and above the 82-9908A part number on the component side of the printed circuit board. Please note that if the last character in the silkscreen revision number is any letter other than D (for example, 16-0366C), the information in the 9908A practice is correct.

1.02 In the event that this addendum section is revised or reissued, the reason for revision or reissue will be stated in this paragraph.

1.03 On the printed circuit boards of Issue 2 9908A subassemblies built between March, 1986, and March, 1988, the silkscreened dB-value designations (0.5, 1, 2, and 4) adjacent to the EQUALIZATION DIP switch (S1) are on the side of the switch opposite the IN position indicated by an arrow. This arrangement is the reverse of all other versions of the Issue 2 9908A, that is, the dB-value designations on all other versions are on the same side of the switch as the ON (or IN) position indicated by the arrow. This means that on Issue 2 9908A subassemblies with the 16-0366D silkscreen revision number mentioned above, equalization is introduced by setting the S1 DIP-switch positions away from the indicated dB values (rather than toward the dB values as stated in the practice). The figures below indicate proper switch settings for the various versions of the Issue 2 9908A.



FOR ISSUE 2 9908A SUBASSEMBLIES WITH A 16-0366D SILKSCREEN REVISION NUMBER, SET THE dB-VALUE SWITCHES TO IN, THAT IS, AWAY FROM THE SILKSCREENED dB VALUES, TO INTRODUCE ACTIVE SLOPE EQUALIZATION.*



FOR ISSUE 2 9908A SUBASSEMBLIES WITH A SILKSCREEN REVISION NUMBER ENDING IN ANY LETTER EXCEPT D, SET THE dB-VALUE SWITCHES TO ON (OR IN), THAT IS, TOWARD THE SILKSCREENED dB VALUES, TO INTRODUCE ACTIVE SLOPE EQUALIZATION.*

* GAIN AT 2804Hz re 1004Hz.

9908A Active Slope Equalizer Subassembly

description and application

The 9908A Active Slope Equalizer subassembly provides from 0 to 7.5dB of active slope-type amplitude equalization (equalized gain) at 2804Hz (re 1004Hz) in prescription-set 0.5dB increments. The subassembly plugs onto the 6927, 6927A, 6947, 6947A, 6962, 6962A and 9662 E&M SF Signaling Sets with Gain. Each of these modules accommodates two 9908A subassemblies, one for post-equalization in the receive channel and one for pre-equalization in the transmit channel. (Additional similar modules that accept the 9908A may be built in the future.) The 9908A is designed for use with nonloaded cable facilities and does not affect its host module's flat gain settings. Frequency response of the 9908A is shown graphically in figure 1 and in tabular form in table 1.

mounting and connections

The 9908A subassembly plugs into a five-pin receptacle on the printed circuit board of the host module. All electrical connections to the subassembly are provided through this receptacle. A standoff post and screw further secure the subassembly to the host module.

alignment

A four-position DIP switch on the 9908A must be set to provide the required amount of equalization before the module and subassembly are placed into service. Determine the required amount of equalized gain at 2804Hz (re 1004Hz) and set positions S1-1 through S1-4 to match this amount as closely as possible (see table 2). Switch positions are cumulative; total equalization introduced is the sum of those positions set to ON (i.e., set toward the dB values indicated adjacent to S1). From 0dB (S1-1 through S1-4 OFF) to 7.5dB (S1-1 through S1-4 ON) can be introduced in 0.5dB increments.

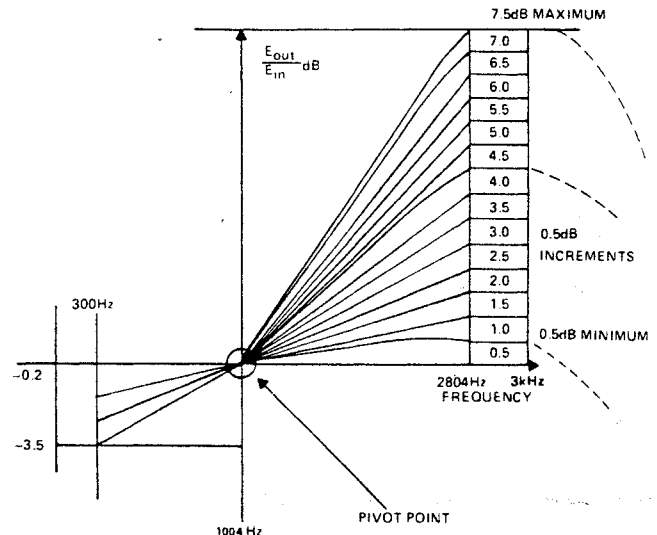


figure 1. Typical response curves for 9908A Equalizer subassembly

1004Hz-2804Hz difference	amount of equalized gain required
0.0 to 0.2dB	0.0dB
0.3 to 0.7dB	0.5dB
0.8 to 1.2dB	1.0dB
1.3 to 1.7dB	1.5dB
1.8 to 2.2dB	2.0dB
2.3 to 2.7dB	2.5dB
2.8 to 3.2dB	3.0dB
3.3 to 3.7dB	3.5dB
3.8 to 4.2dB	4.0dB
4.3 to 4.7dB	4.5dB
4.8 to 5.2dB	5.0dB
5.3 to 5.7dB	5.5dB
5.8 to 6.2dB	6.0dB
6.3 to 6.7dB	6.5dB
6.8 to 7.2dB	7.0dB
7.3 to 7.7dB	7.5dB

table 2. Equalized gain settings from cable loss data

9908A switch setting (in dB)	equalized gain (in dB) introduced at various frequencies										
	300Hz	400Hz	500Hz	800Hz	1000Hz	1500Hz	1800Hz	2500Hz	2804Hz	3000Hz	3200Hz
0	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.5	-0.5	-0.4	-0.3	-0.1	0.0	+0.2	+0.3	+0.4	+0.5	+0.5	+0.5
1.0	-0.8	-0.7	-0.6	-0.2	0.0	+0.4	+0.6	+0.9	+1.0	+1.0	+1.0
1.5	-1.1	-0.9	-0.8	-0.2	0.0	+0.6	+0.9	+1.3	+1.4	+1.5	+1.5
2.0	-0.8	-0.6	-0.5	-0.2	0.0	+0.4	+0.7	+1.5	+1.9	+2.2	+2.5
2.5	-1.1	-0.9	-0.7	-0.2	0.0	+0.6	+1.0	+2.0	+2.4	+2.7	+3.0
3.0	-1.5	-1.2	-1.0	-0.3	0.0	+0.8	+1.3	+2.4	+2.9	+3.2	+3.5
3.5	-1.8	-1.5	-1.2	-0.4	0.0	+1.0	+1.6	+2.8	+3.4	+3.7	+4.7
4.0	-1.8	-1.5	-1.1	-0.4	0.0	+1.1	+1.8	+3.4	+4.1	+4.5	+4.9
4.5	-2.2	-1.7	-1.4	-0.5	0.0	+1.3	+2.1	+3.9	+4.6	+5.1	+5.4
5.0	-2.5	-2.0	-1.6	-0.6	0.0	+1.5	+2.4	+4.3	+5.1	+5.5	+5.9
5.5	-2.8	-2.3	-1.8	-0.6	0.0	+1.7	+2.7	+4.7	+5.5	+6.0	+6.5
6.0	-2.5	-2.0	-1.6	-0.6	0.0	+1.5	+2.5	+5.0	+6.0	+6.7	+7.4
6.5	-2.8	-2.2	-1.8	-0.6	0.0	+1.7	+2.8	+5.4	+6.5	+7.2	+7.9
7.0	-3.2	-2.5	-2.0	-0.7	0.0	+1.9	+3.1	+5.8	+7.0	+7.7	+8.4
7.5	-3.5	-2.8	-2.3	-0.8	0.0	+2.1	+3.4	+6.3	+7.5	+8.2	+8.9

table 1. Typical frequency response of 9908A Equalizer subassembly

