TYPE N1, O, AND ON CARRIER TELEPHONE SYSTEMS – OVERALL CHANNEL LINE-UP SUMMARY CHARTS – LINE-UP AND MAINTENANCE O AND ON CARRIER – SPECIAL SERVICES CHANNEL UNIT (J98705AP)

This section is reissued to add a carrier leak test and change the channel unit output test requirements.

Since this reissue covers a general revision, marginal arrows ordinarily used to indicate changes have been omitted.

This section consists of an overall diagram of the channel unit (Fig. 1) and charts giving the tests required for line-up and maintenance of the special services channel unit.

Chart I is provided for the standard testing arrangement. Chart II is provided for locations where the mobile carrier test bay is used.

The special services channel unit consists of a VF subassembly and a carrier frequency subassembly. The carrier frequency subassembly is identical to that used in the J98705 message channel unit, and tests and adjustments are identical for the carrier frequency subassembly.

The switch N-O on the left side of the channel unit must be set to O position for these tests and for usage with the O or ON carrier system.

It will be necessary to refer to associated sections in this division of practices for the detailed procedures and for steps to be taken where requirements are not met. Familiarity with the sections covering the testing methods in detail is essential before this section is used.

The tests must be completed in numerical sequence with testing equipment which has been accurately calibrated.

Maximum overall channel noise requirements will be determined by the type of circuit which will be applied to the special services channel.

APPARATUS:

1 — Hewlett-Packard 400-type Vacuum Tube Voltmeter (VTVM)
1 — W2DW Cord (to connect VTVM to test points)
1 — Channel Unit Test Stand (J98705M)
1 — P19A Cord (used with channel unit test stand)
1 — Transmission Measuring Set, 40B, 21A TMS, or equivalent (600-ohm measuring set)

CHART I

LINE-UP AND MAINTENANCE TESTS FOR TYPE O AND ON CARRIER — SPECIAL SERVICES CHANNEL UNIT (J98705AP)

Note: Before using the channel unit test stand, replace the 130v, 1/8 amp fuse with a 3/8 amp fuse.

TEST	PURPOSE OF TEST	MEAS EQUIP. REQUIRED TESTING END	MEASURE TEST POINT TO GRD OR BETWEEN TEST POINTS	REQUIRED VALUE		ADJUST	TEST CONDITIONS AND REMARKS	SECTION REFERENCE
				TEST	READJUST			
1	Transmitting VF output level	VTVM Channel unit test stand	J5	+7.5 to +8.5 db	+8.0 db	TRSG	Send 1000~ at —16.0 dbm in VF IN jack. Turn selector on test stand to O1 TERM.	362-315-501
2	Channel unit output level		T jack	—42.5 to —44.5 db	—43.5 db	T		
3	Carrier leak		T jack	Less than —66.0 db	—	—	Terminate VF IN with 600 ohms.	
				Less than —54.0 db	—	—	Turn selector on test stand to N1-O1 NORMAL.	
4	Receiving VF input level		J6	+11.0 to +13.0 db	+12 db	R	***Distant End:*** Send 1000~ at —16 dbm to VF input of channel unit. (See Note 1. Chart II)	362-315-502
5	Receiving VF output level	TMS	DEMOD OUT or equivalent VF OUT jack	—	Per circuit order	REC		

CHART II

LINE-UP AND MAINTENANCE TESTS FOR TYPE O AND ON CARRIER — SPECIAL SERVICES CHANNEL UNIT (J98705AP) USING THE MOBILE CARRIER TEST BAY

Note: Before using the channel unit test stand, replace the 130v, 1/8 amp fuse with a 3/8 amp fuse.

TEST	PURPOSE OF TEST	METER SWITCH	VF PATH SWITCH	MEASURE TEST POINT TO GRD OR BETWEEN TEST POINTS	REQUIRED VALUE		ADJUST	TEST CONDITIONS AND REMARKS	SECTION REFERENCE
					TEST	READJUST			
1	Transmitting VF output level	5	5	J5	+7.5 to +8.5 db	+8.0 db	TRSG	Turn selector on test stand to O1 TERM.	362-315-501
2	Channel unit output level	5	5	T jack	—42.5 to —44.5 db	—43.5 db	T		
3	Carrier leak	5	3	T jack	Less than —66.0 db	—	—	Terminate VF IN with 600 ohms.	
					Less than —54.0 db	—	—	Turn selector on test stand to N1-O1 NORMAL.	
4	Receiving VF input level	5	3	J6	+11.0 to +13.0 db	+12 db	R	(See Note 1.)	362-315-502
5	Receiving VF output level (See Note 2.)	7	6	VF OUT	—	Per circuit order	REC		

Note 1: The receiving VF output should be remeasured and adjusted to the required output one week after alignment, if tubes were changed, and one day after alignment, if no tubes were changed.

Note 2: Make the final adjustment with a transmission measuring set at the VF patch bay.

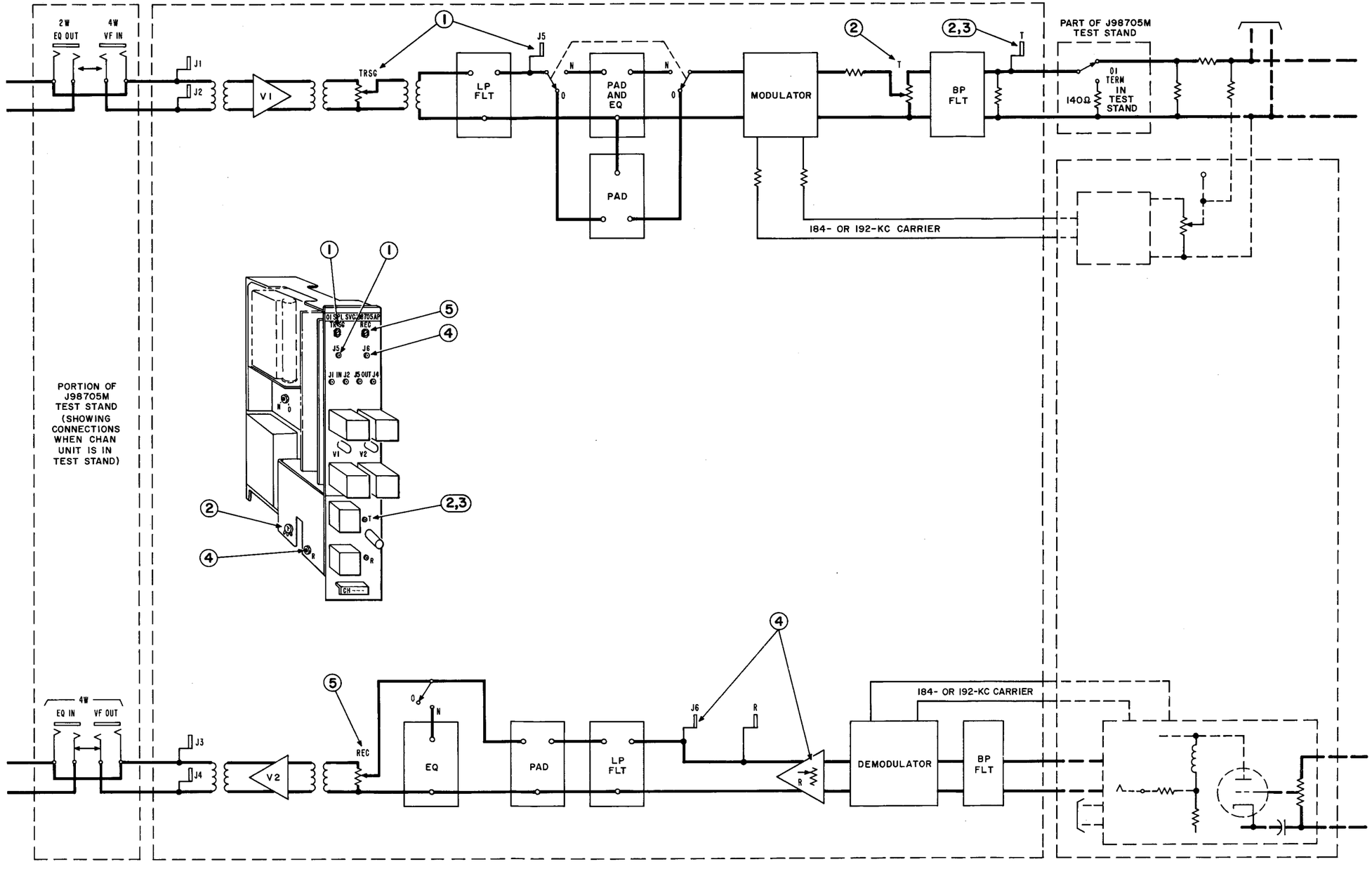

Fig. 1 — Special Services Channel Unit