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SPP	PRODUCTION	TEST	PROCEDURE

### PURPOSE:

TO ENSURE THAT THE SWITCHING PATCH PANEL CONFORMS TO THE FOLLOWING SPECIFICATIONS:

TEST ONE: POWER CAPABILITY OF 1 WATT CONTINUOUS WAVE POWER

TEST TWO: INSERTION LOSS LESS THAN .1DB FROM 2-30 MHZ

TEST THREE: JACK-TO-JACK ISOLATION OF AT LEAST 41DB @ 30 MHZ

AND 54DB AT 8 MHZ

TEST FOUR: VSWR OF 1.02:1 OR BETTER

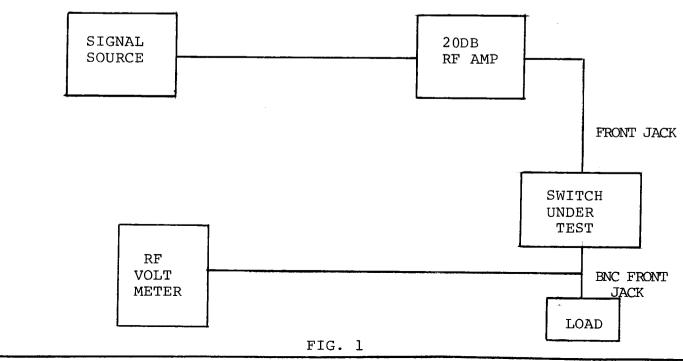
# TEST EQUIPMENT REQUIRED:

MARCONI TF-1515 SIGNAL GENERATOR OR EQUIVALENT
MILLIVAC MV-28 RF VOLTMETER OR EQUIVALENT
CALIBRATED DUMMY LOAD TEKTRONIX P/N 011-0049-01 OR EQUIVALENT
APPROPRIATE R.F. CONNECTORS
4 FOOT RG-58/U WITH APPROPRIATE CONNECTORS
20 DB RF AMPLIFIER AND POWER SUPPLY IF REQUIRED TMC A-5819 RF
OUTPUT MODULE
ANZAC PRECISION BRIDGE OR EQUIVALENT RB-1-50

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2 MHZ 15 MHZ 30 MHZ

CHART 1



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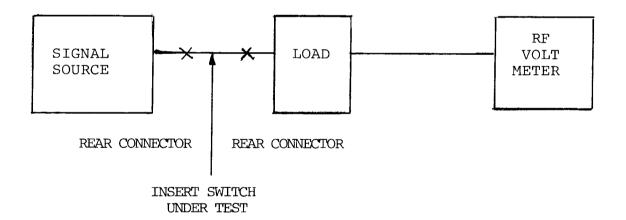
TEST 2 --- INSERTION LOSS

## PURPOSE:

TO ENSURE THAT THE INSERTION LOSS OF THE PATCH PANEL DOES NOT EXCEED 0.1 DB THROUGHOUT FREQUENCY RANGE 2-30 MHz.

### PROCEDURE:

CONNECT TEST EQUIPMENT AS SHOWN IN FIGURE 2. ESTABLISH A ODB REFERENCE AT 50 OHMS. PLACE THE SWITCH UNDER TEST BETWEEN THE SIGNAL SOURCE AND THE HP DUMMY LOAD USING THE TWO REAR CONNECTORS ON THE SWITCH.



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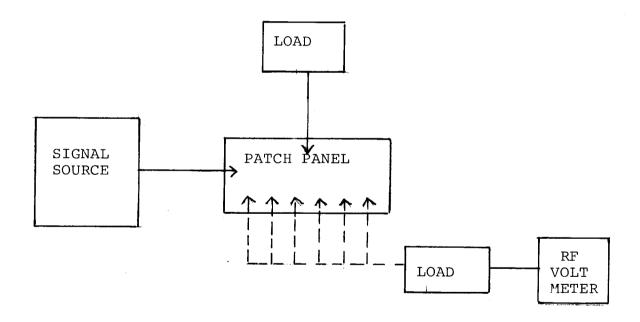
TEST 3 --- JACK-TO-JACK ISOLATION

# PURPOSE:

TO TEST UNITS FOR JACK-TO-JACK ISOLATION OF GREATER THAN 54DB AT 8MHZ AND GREATER THAN 41DB AT 30MHZ.

## PROCEDURE:

SET A ODB REFERENCE LEVEL AT (SEE CHART) MHZ ON THE MILLIVAC RF VOLTMETER OR EQUIVALENT AND CHECK AS IN FIGURE 3 ALL ADJACENT JACKS ON THE PATCH PANEL, RECORDING THE LEAST AMOUNT OF JACK-TO-JACK ISO-LATION ON THE TEST DATA SHEET.



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TEST 4 --- VOLTAGE STANDING WAVE RATIO

#### PURPOSE:

TO ENSURE THAT THE V.S.W.R. OF ALL SWITCHES, WHATEVER THE OPERATING POSITION, MAINTAINS A V.S.W.R. OF 1.02:1 OR BETTER.

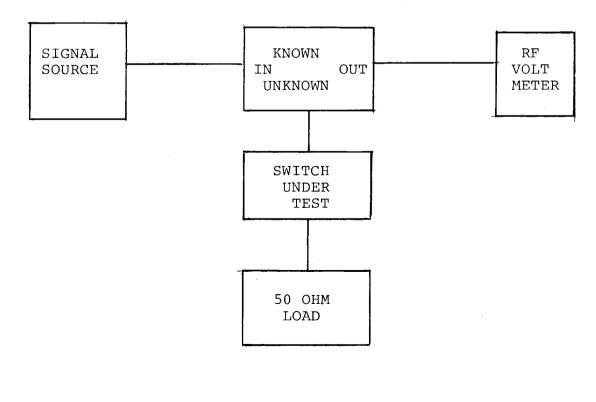
### PROCEDURE:

ESTABLISH A ODB REFERENCE POINT ON THE MILLIVAC RF VOLTMETER OR EQUIVALENT WITH THE MARCONI TF1515 SIG GEN OR EQUIVALENT AND THE ANZAC PRECISION BRIDGE OR EQUIVALENT UNKNOWN PORT OPEN CIRCUITED. SHORT CIRCUIT THE UNKNOWN PORT ON THE ANZAC PRECISION BRIDGE OR EQUIVALENT AND THE DIFFERENCE BETWEEN BRIDGE OPEN-SHORT SHOULD BE LESS THAN 1DB.

PLACE A DUMMY LOAD THAT GIVES A VSWR OF BETTER THAN 1.01:1 (WITHOUT THE SWITCH) TO THE OUTPUT PORT OF THE SWITCH AND INSERT THE SWITCH ON TO THE UNKNOWN PORT OF THE ANZAC PRECISION BRIDGE OR EQUIVALENT. RECORD ON THE DATA SHEET AT THE FREQUENCIES GIVEN IN CHART 1, THE V.S.W.R. AS CALCULATED FROM THE RETURN LOSS FIGURE INDICATED BY THE RF VOLTMETER.

THIS COMPLETES THE PRODUCTION TEST OF THE SWITCHING PATCH PANEL.

#### PRECISION BRIDGE



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