



## INSTRUCTION MANUAL

MODEL NO. PHD460-C

SERIAL NO. 323812-B

115 EAST WATKINS

PHOENIX, ARIZONA 85004-2925

TEL.: (602) 252-8058

TWX: 910-951-4220

INSTRUCTION MANUAL FOR  
PCC AND PCD ISOLATOR PANELS  
MANUAL NO. 74081

DESCRIPTION

THE PCC AND PCD SERIES OF ISOLATOR PANELS COMBINE A SINGLE OR DUAL ISOLATOR WITH A SECOND HARMONIC FILTER. THE COMBINATION IS THEN USED IN A TRANSMITTER OUTPUT CIRCUIT TO AFFORD ISOLATION BETWEEN TRANSMITTERS FEEDING A COMMON ANTENNA OR TRANSMITTERS FEEDING COMMON ANTENNAS IN CLOSE PROXIMITY. SPECIFICATIONS OF THE UNITS ARE TABULATED BELOW:

SPECIFICATIONS

SERIES	FREQUENCY BAND MHZ	INSERTION LOSS DB (MAX.)	ISOLATION DB (MIN.)
SINGLE STAGE			
PCC 150	136-174	0.6	25
PCC 460	406-512	0.4	25
PCC 800	800-960	0.3	25
DUAL STAGE			
PCD 150	136-174	1.0	50
PCD 460	406-512	0.8	50
PCD 800	806-960	0.6	50

COMMON SPECIFICATIONS PCC, PCD AND PCT ISOLATION PANELS

VSWR	1.25:1
MAXIMUM POWER INPUT	150 WATTS
CONNECTORS	TYPE N FEMALE
PHYSICAL LAYOUT	ALL OF THE ISOLATOR PANELS ARE SUPPLIED, MOUNTED ON A TRAY WHICH EXTENDS 8" BEHIND THE STANDARD 3-1/2" X 19" RACK PANEL SUPPLIED.
TEMPERATURE SENSING OPTION	SENSING OF THE OUTPUT LOAD TERMINATION IS AVAILABLE AT EXTRA COST. TO ORDER, SPECIFY: S-140 OR S-160 (140 DEGREES OR 160 DEGREES F ACTIVATION TEMPERATURE. CONTACTS ARE NORMALLY CLOSED.

ALL ISOLATOR PANEL ASSEMBLIES ARE SUPPLIED WITH A 2ND HARMONIC FILTER.



THE SUFFIX ADDED TO THE MODEL NUMBER IS OBTAINED PER THE INFORMATION BELOW.

LOAD TERMINATION

30 WATTS  
60 WATTS  
125 WATTS

SUFFIX

AA  
B  
C

INSTALLATION

THE UNITS CAN BE MOUNTED IN A STANDARD 19" RACK. CARE SHOULD BE TAKEN TO KEEP OTHER ISOLATORS OR STEEL MATERIAL A MAXIMUM OF 2" AWAY.

RETUNING

SHOULD THE ISOLATORS NEED RETUNING THE INSTRUCTIONS GIVEN ON FIGURE 1 AND FIGURE 2 SHOULD BE FOLLOWED. A TWO-CHANNEL NETWORK ANALYZER SHOULD BE USED.

### FIGURE 1 SINGLE ISOLATOR TUNING

1. WITH CONNECTIONS AS SHOWN ADJUST C1 AND C2 TO MAXIMIZE SIGNAL @ F0 IN RX.
2. REVERSE CONNECTIONS AND ADJUST C3 AND, IF NECESSARY, MAGNET STRENGTH TO OBTAIN 40 DB ISOLATION @ F0.
3. RESTORE STEP 1 CONNECTIONS AND TUNE C1 AND C2 TO MAXIMIZE SIGNAL AGAIN. CHECK INSERTION LOSS. IT SHOULD AGREE WITH SPECS. GIVEN. RETURN LOSS AT PORTS #1 AND #2 SHOULD BE 23 DB OR MORE.

### FIGURE 2 DUAL ISOLATOR TUNING

STEP\_1 CONNECT PORT #1 TO SOURCE AND PORT #4 TO RX. TUNE C1 THRU C4 TO MAXIMIZE SIGNAL AT RX. (TERMINATIONS SHOULD BE AT PORTS #5 AND #6)

STEP\_2 NOW CONNECT SOURCE TO PORT #4, RX TO PORT #1 AND REMOVE THE LOAD FROM PORT #5. ADJUST C6 AND THE MAGNET OF ISOLATOR 1 TO OBTAIN A 40 DB MINIMUM AT F0. REMOVE THE LOAD FROM PORT #6, CONNECT THE LOAD TO PORT #5 AND ADJUST C5 AND MAGNET OF ISOLATOR 2 TO OBTAIN A 40 DB MINIMUM. (80 DB FOR ENTIRE UNIT)

STEP\_3 ATTACH SOURCE TO PORT #1 AND RX TO PORT #6. TERMINATE PORTS #4 AND #5. ADJUST C2 AND C3 TO MINIMIZE ENERGY AT PORT #6. (IT WILL REQUIRE SEVERAL ADJUSTMENTS OF C2 AND C3) RESTORE THE ARRANGEMENT OF STEP 1 AND CHECK INSERTION LOSS. COMPARE WITH SPECS. GIVEN. INPUT AND OUTPUT RETURN LOSSES SHOULD BE 23 DB+.

THIS MANUAL INCLUDES FIGURE 1 AND FIGURE 2.



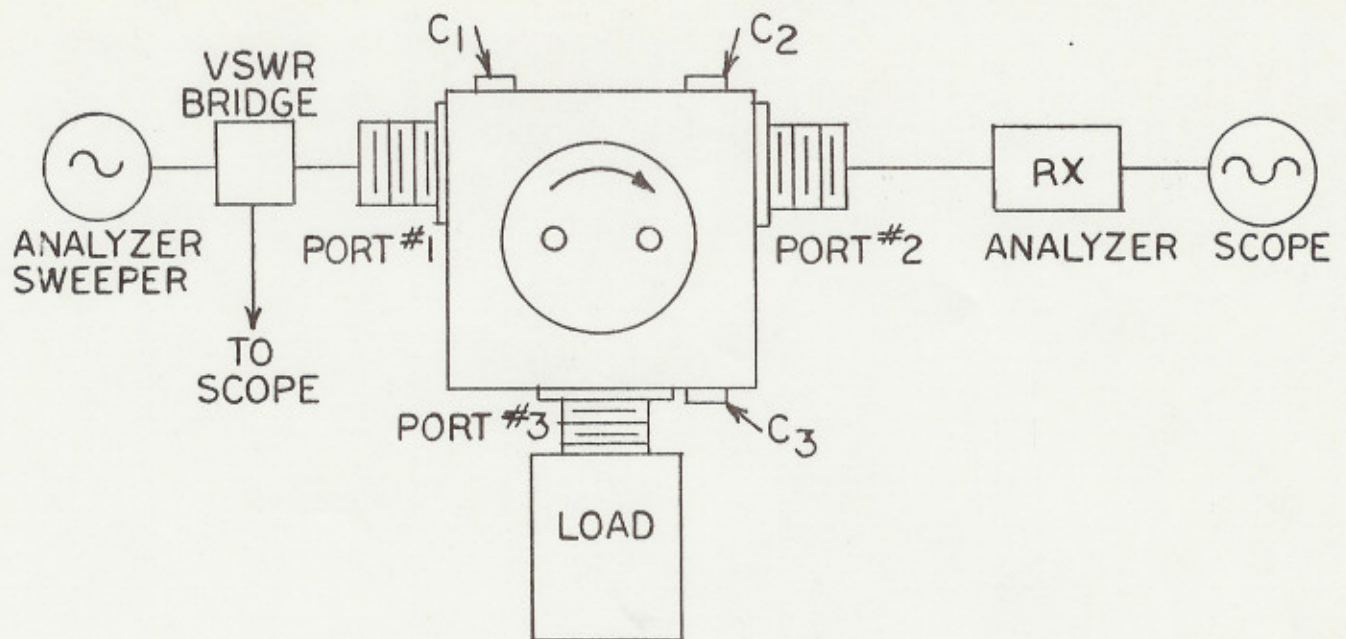


FIGURE 2 DUAL ISOLATOR TUNING

