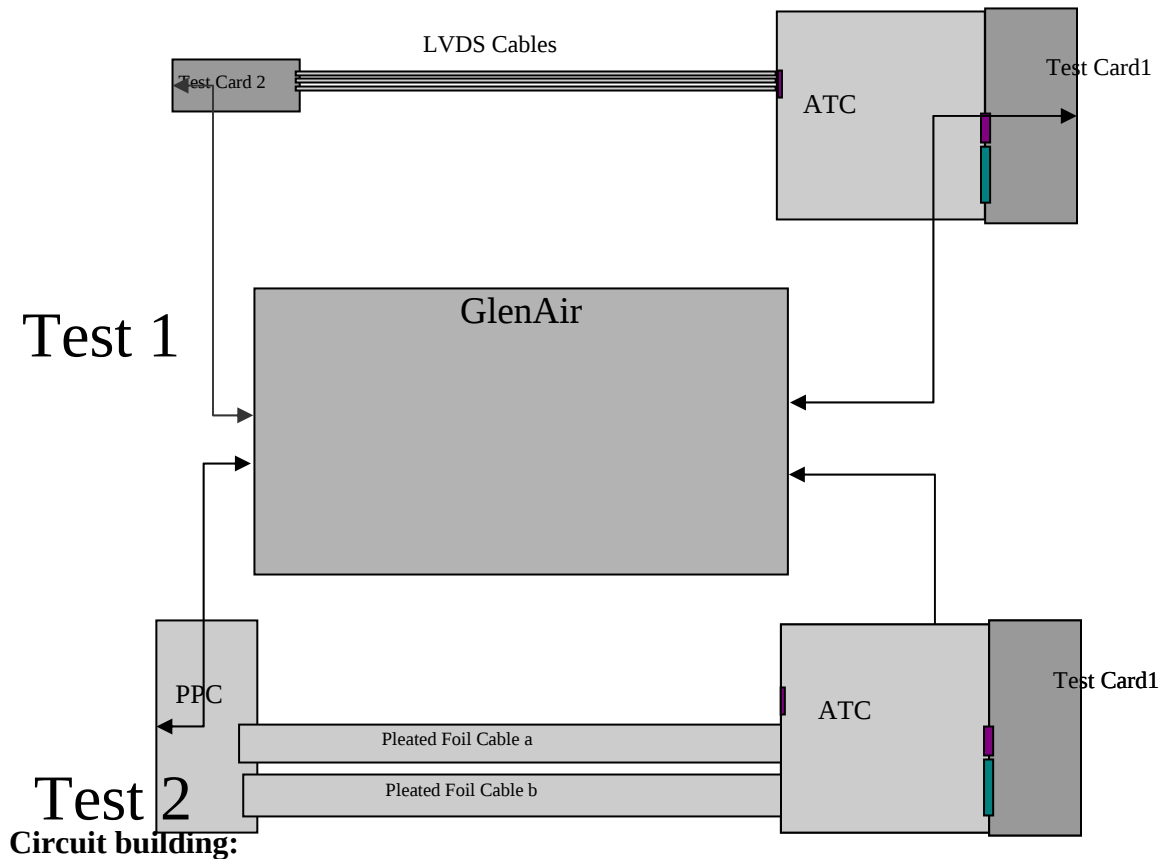


GlenAir Test Procedure

GlenAir (GA) tester are used to test each circuit for proper terminal to terminal connection and check each circuit against all other circuits for shorts¹. All tests are performed at high rate with the tester stopping and positively identifying all circuit faults and the number of the faulty circuits².

In our case, the circuits will be the cables connecting ADF output pins to respective TAB input pins (LVDS cables), and BLS cables to ADF input pins (PPC, PFC, ATC). Therefore there are two separate sets of hardware to check.

In order to make the tests one has to build a circuit as below:



Test 1:

- Connect ATC to TestCard1(TC1)
- Connect 4 LVDS cables to TestCard2(TC2)
- Connect other ends of the cables to ATC
- Connect TC1 and TC2 to GlenAir with appropriate flat cable (they are same)

Test 2:

- Connect ATC to TC1

¹GlenAir manual1A

²GlenAir manual 1A

- Connect PFCs to PPC
- Connect other ends of PFC to ATC
- Connect TC1 and PFC to GlenAir with appropriate cables. Use white cables with PPC.

On the front panel of GA there is a knob to choose which of above mentioned two tests to perform. Turning the knob towards 'C' causes GA to test connectivity between the terminals. Turning the knob towards 'S' causes GA to test shorts between any pins. When testing we should first check the connectivities and then proceed to check shorts because test cards are built such that all of the ground are connected to each other.

It should be understood that. Because of this, every test should be performed twice with every set.

Making connections to test cards:

Every test has to be done in two parts because of the fact that GA tester doesn't have enough pins to complete the test in one cycle.

TC1 has 8 connectors (50 pin 3M connectors), 4 (J2/J4; J3/J5) of which will be used in test1, and others (J7/J9; J8/J10) in test2. For test1's first half J2/J4, second half J3/J5 should be used. For test2's first half J7/J9, second half J8/J10 should be used.

TC2 has 4 connectors (50 pin 3M connectors), J1/J3 should be used for the first half of the test and the rest for the second half.

When connecting PPC to GA in test2, in the first half of the test J1/J2/J3/J4/J5/J6/J7/J8; in the second half of the test J11/J12/J13/J14/J15/J16/J17/J18 jacks should be used.

Starting the tests:

After making the connections it is necessary to check that GA is plugged in a power outlet. Then adjusting GA knob on the front panel and switching on the GA are next necessary steps.

Understanding the tests:

Depending on the type of the test the response that we get from GA is different:

If you are testing for connectivities, then only error that you can get is an open error. To see where it occurs all you need to do is look at GA's display and write down the number to which GA's arrow points. That means that, the circuit is not a complete one at that specific pin. Pin number assignments can be found on one side of GA. By using pin assignments sheet you can easily find on which channel an open status occurred.

If you are testing for shorts, then you expect to get short errors on all even numbered pins, because of the test cards design. When you get a short error on an even numbered pin, you can continue the test by pressing start again. If you are getting a short on odd numbered pins, then write down the pin number on the table.