

Application Notes

Using Ansur with the ESA612 and the 1210 adapter

Introduction

The 1210 Adapter Box Assembly has been designed to increase the number of lead or applied parts connections to the ESA612 Electrical Safety Analyzer from 5 to 14. The adapter itself ties up to ten leads together into a single lead that is plugged into one of the input jacks of the analyzer. The four remaining analyzer input jacks can also be used in conjunction with the adapter.

This application note explains how to set up a patient lead configuration using this adapter.

The principle of the adapter is that it tethers all leads on the adapter to a single input on the ESA612 and appears as a single lead measurement in Ansur.

Example 1

Physical connections

Figure 1 shows one application of the adapter. The defibrillator/monitor in the example has ten ECG leads, two pacer leads, and two defibrillator paddles which need to be tested together, and in groups of single function, for current leakage per IEC62353.

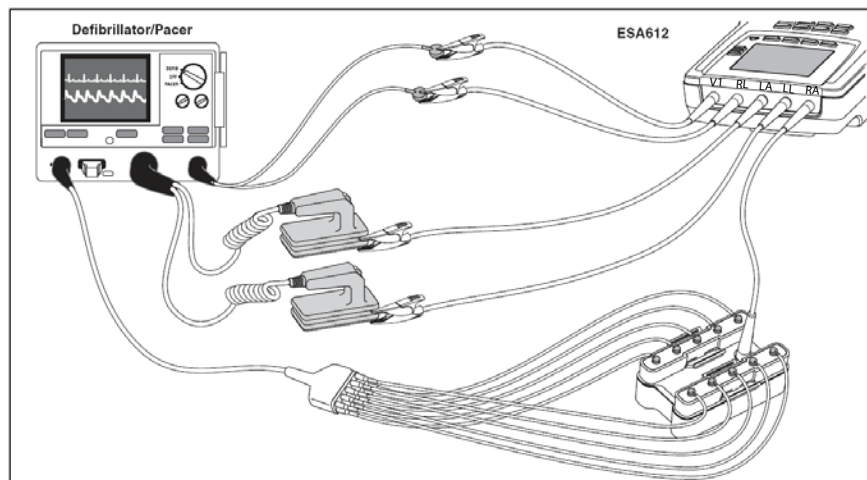


Figure 1: Adapter Connections – Defib/Monitor example

Fluke Biomedical

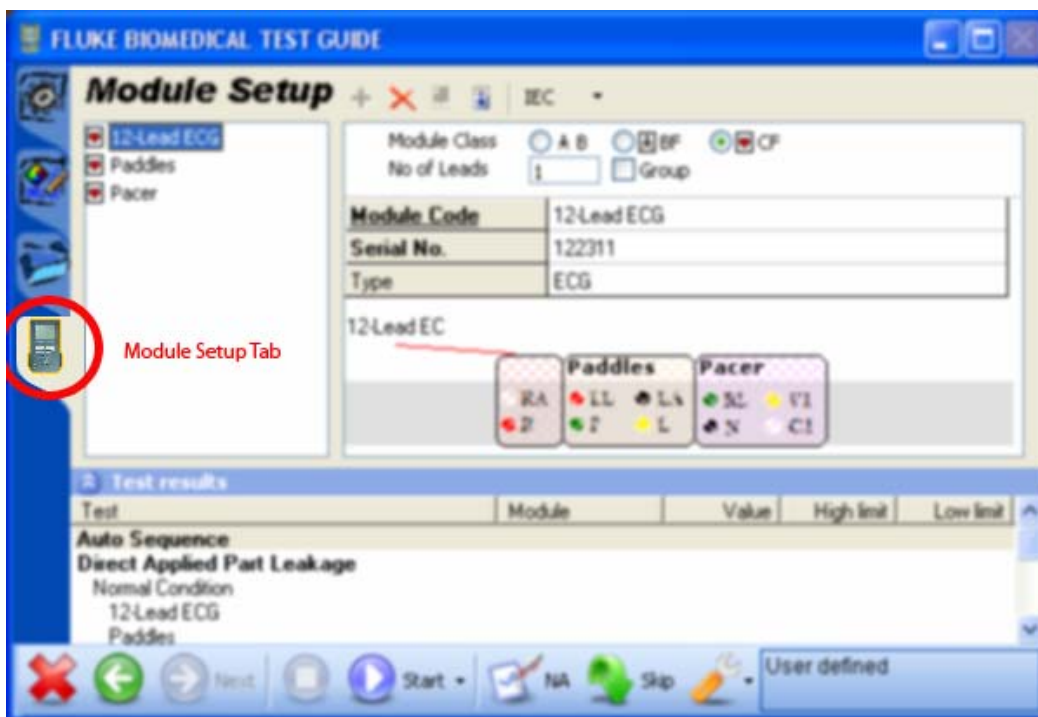
6045 Cochran Road, Cleveland, OH 44139-3303 U.S.A.
 Tel: 440.248.9300, Toll free: 800.850.4608, Fax: 440.349.2307
 sales@flukebiomedical.com, www.flukebiomedical.com

Application Notes

The example shows the ECG leads to be snap-type connectors and two BJ2ECG adapters are shown plugged into the adapter. If the ECG leads did not have snap connectors, then the Universal Snap to Banana Adapter can be used to make the connections to the adapter. The common lead from the adapter is plugged into the RA jack (1st jack) of the analyzer. Using four sheathed test leads with alligator clips, connect the two defibrillator paddles into the RL and V1 analyzer jacks and the two pacer leads into the LL and LA jacks. Using the selection that ties all five analyzer jacks together will test all fourteen leads for leakage current. Using the selection of applied part group of 1, 2, and 2 allows for testing of groups of applied parts of single function.

Ansurs configuration

For the set-up above, we must define three patient lead groups/modules for the auto-sequence. This is done in the *Module Setup* tab in the *Test Guide*.



Fluke Biomedical

6045 Cochran Road, Cleveland, OH 44139-3303 U.S.A.
 Tel: 440.248.9300, Toll free: 800.850.4608, Fax: 440.349.2307
 sales@flukebiomedical.com, www.flukebiomedical.com

Application Notes

ECG leads

The first module we define will be one lead for the 12-lead ECG. The ECG leads will appear as one single lead connected to the RA input since they are tethered on the 1210 adapter, and the single lead from the 1210 adapter is connected to the RA input on the ESA612.

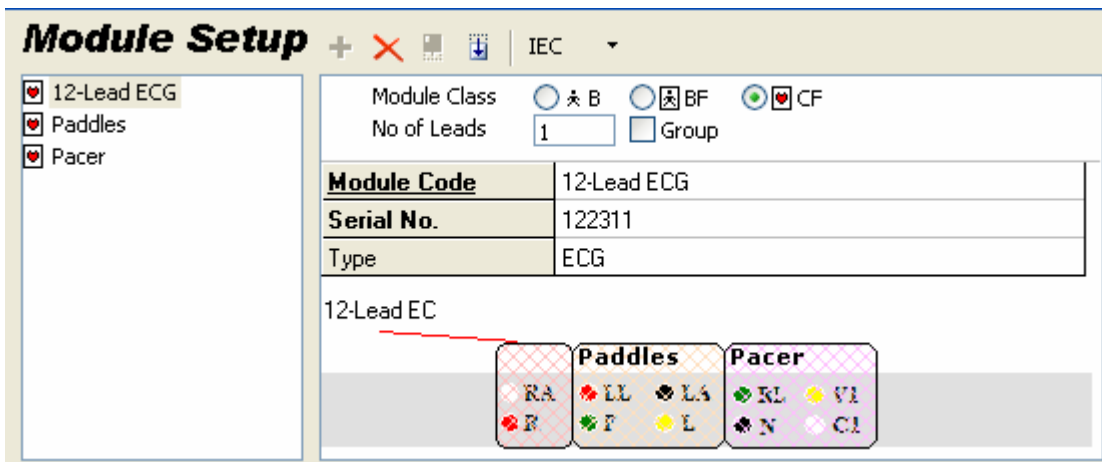
Paddles

The second group is the Paddles. They are defined as a normal module with two leads, occupying the LL and LA inputs on the ESA612.

Pacer

The last module is for the two leads for the Pacer. They are also defined as a normal module with two leads, occupying the RL and V1 leads.

The complete *Module Setup* configuration in Ansur should then look like this:



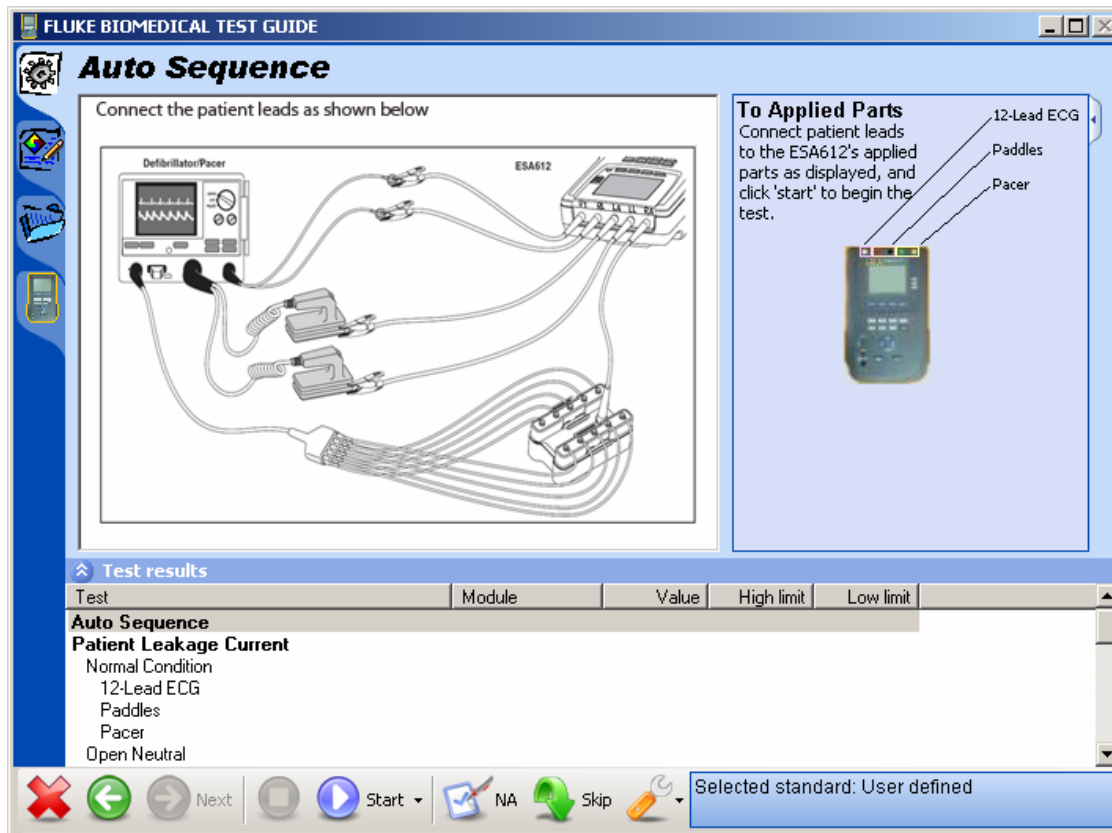
Fluke Biomedical

6045 Cochran Road, Cleveland, OH 44139-3303 U.S.A.
 Tel: 440.248.9300, Toll free: 800.850.4608, Fax: 440.349.2307
 sales@flukebiomedical.com, www.flukebiomedical.com

Application Notes

Test guide

The template author can describe the test set-up in the procedure text:



Summary

As described in this application note, the 1210 adapter allows the user to expand the number of leads or applied part connections to the ESA612 Electrical Safety Analyzer from 5 to 14 when required. The 5 integrated input jacks on the Analyzer allow for common lead/applied part connections while keeping the Analyzer portable and easy to carry. The adapter gives the user the flexibility to test more than 5 leads or applied parts when required. The Ansur automation allows for automated tested for easy and speedy testing and documentation. If you have any questions or comments about the applications described here, please contact us via our website or technical support line at (800) 850-4608 (US only) or 440-248-9300 for more information.

Fluke Biomedical

6045 Cochran Road, Cleveland, OH 44139-3303 U.S.A.
 Tel: 440.248.9300, Toll free: 800.850.4608, Fax: 440.349.2307
 sales@flukebiomedical.com, www.flukebiomedical.com