

## AOZ Studio Beta - Bug #767

### Labels and line numbers can't be referenced from a Gosub inside a Procedure or Function.

05/30/2021 03:56 PM - Brian Flanagan

<b>Status:</b>	Rejected	<b>Start date:</b>	05/30/2021
<b>Priority:</b>	High	<b>Due date:</b>	
<b>Assignee:</b>	Francois Lionet	<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	3:00 hours
<b>Target version:</b>	none		
<b>Affected version:</b>	1.0.0 (B10) u16		
<b>Description</b>			
<p>This affects both the AOZ and Amiga manifests.</p> <p>By definition, Labels and Line numbers should be Global. Apparently, now, they are not. (These used to work.)</p> <p>Problem with labels:</p> <pre>DoProcedure[1,2,3] End  DoStuff:     Print "Stuff" Return  Procedure DoProcedure[a,b,c]     Print a,b,c     Gosub DoStuff End Procedure</pre> <p>The above produces an Internal Error.</p> <p>Modifying the code to use a line number instead of a label is revealing.</p> <pre>DoProcedure[1,2,3] End  100 Print "Stuff" Return  Procedure DoProcedure[a,b,c]     Print a,b,c     Gosub 100 End Procedure</pre> <p>Now the error message is "label not defined".</p> <p>Similar results occur inside functions:</p> <p>With labels:</p> <pre>result=DoFunction(1,2,3) If result&gt;0 Then Print result  End  DoStuff:     Print "Stuff" Return  Function "DoFunction",a,b,c     Print a,b,c</pre>			

```
Gosub DoStuff
done=123
End Function (done)
```

...and with line numbers.

```
result=DoFunction(1,2,3)
If result>0 Then Print result
```

```
End
```

```
100 Print "Stuff"
Return
```

```
Function "DoFunction",a,b,c
Print a,b,c
Gosub 100
done=123
End Function (done)
```

From these tests, my assumption is that neither named labels, nor line numbers are functioning globally.

IMO, labels should have the same scope as where they are defined.

Any label or line number defined in the global scope should be, by definition, a global label/line number.

Since, in these examples, both the Line Number and the Label's scope is global, so they **should** be accessible inside procedures and functions.

Just FYI: In AMOS Pro, Gosub to a line number from inside a Procedure worked fine.

(Labels did not work. Apparently AMOS had the same problem as AOZ with global named labels.)

## History

### #1 - 09/15/2021 12:59 AM - Brian Flanagan

- Assignee set to Francois Lionet

- Affected version changed from 1.0.0 (B8) to 1.0.0 (B10) u16

Re-tested in 1.0.0 (B8) u16 (9/14)

All 4 examples still fail.

### #2 - 10/21/2021 09:11 AM - Brian Flanagan

Re-tested in 21 Oct 2021 version.

All 4 examples still fail.

NOTE: This was also a problem in **AMOS Pro**. Labels were not recognized inside a procedure whether local or global.

Since apparently, this doesn't work in **AMOS** or **AOZ**, I think I'd like to change the assumptions:

Let's assume that labels are by definition **local**.

This will necessitate the addition of a **Global** command for labels and line numbers:

```
Global Label 100, "MyLabel", 200, "AnotherLabel"
```

That way, by default, the labels would be local to the container they're defined in, be it a Procedure, Function, Instruction, etc.

How do you think they should function at the top level?

My first thought would be that we'd have to specifically define them as **Global** using the suggested **Global Label** instruction in order to be able to use them inside other containers. This would be consistent with how we currently define Global variables. What do you think?

### #3 - 12/13/2022 03:58 PM - Baptiste Bideaux

- Status changed from New to Rejected

No jumps is allowed with Goto, Gosub from a procedure in AOZ. A procedure is a part of code that should works out of the main program code. The mixture of linear and procedural programming has always been a bad thing, even in the days of AMOS Pro.