Kerbal Space Program - Bug #9865

Having a const field on a PartModule on the root part causes physics to break

06/07/2016 03:28 AM - blowfish

Status:	Closed		**Start date:**	06/07/2016
Severity:	Low		**% Done:**	100%
Assignee:				
Category:	Plugins/Add-Ons			
Target version:				
Version:	1.1.2		**Language:**	English (US)
Platform:	Windows		**Mod Related:**	No
Expansion:				

Description

Steps to Reproduce

- Create a PartModule with a const field and add it to a part
- Make a vessel with that part as the root part
- Launch the vessel
- Exit to the space center
- Return to the vessel

Observed Error

An exception is thrown when initializing the vessel, which causes physics to break

```
[EXC 19:07:09.972] FieldAccessException: Cannot set a constant field
    System.Reflection.MonoField.SetValue (System.Object obj, System.Object val, BindingFlags invok
eAttr, System.Reflection.Binder binder, System.Globalization.CultureInfo culture)
    System.Reflection.FieldInfo.SetValue (System.Object obj, System.Object value)
    ProtoPartSnapshot.Load (.Vessel vesselRef, Boolean loadAsRootPart)
    ProtoVessel.LoadObjects ()
    Vessel.Load ()
    Vessel.MakeActive ()
    FlightGlobals.setActiveVessel (.Vessel v, Boolean force)
    FlightGlobals.SetActiveVessel (.Vessel v)
    FlightDriver.Start ()
```

This is caused by copying all the fields from one PartModule to another without first checking that the fields are instance using type.GetFields(BindingFlags.Instance | BindingFlags.Public | BindingFlags.NonPublic) should fix the problem

History

#1 - 06/07/2016 03:31 AM - blowfish

I guess it's not strictly necessary to use BindingFlags.NonPublic, since private and protected fields won't be copied as it is, but it would probably save a bit of headache in some cases, since you are really trying to duplicate the object.

#2 - 07/17/2016 09:56 AM - TriggerAu

- Status changed from New to Needs Clarification

#3 - 07/17/2016 08:45 PM - blowfish

@TriggerAU

Is there any thing specific that needs clarifying? The issue is that having a constant defined on a PartModule, then using that module, causes a physics-breaking exception.

```
public class MyModule : PartModule
{
    public const int ConstInt = 5;

    // ...
```

```
}
```

Using this PartModule would cause the exception.

#5 - 07/17/2016 09:22 PM - blowfish

- Status changed from Needs Clarification to Closed

- % Done changed from 0 to 100

Moving to Modders' Corner tracker and closing