

EOM RF Amplifier Plan

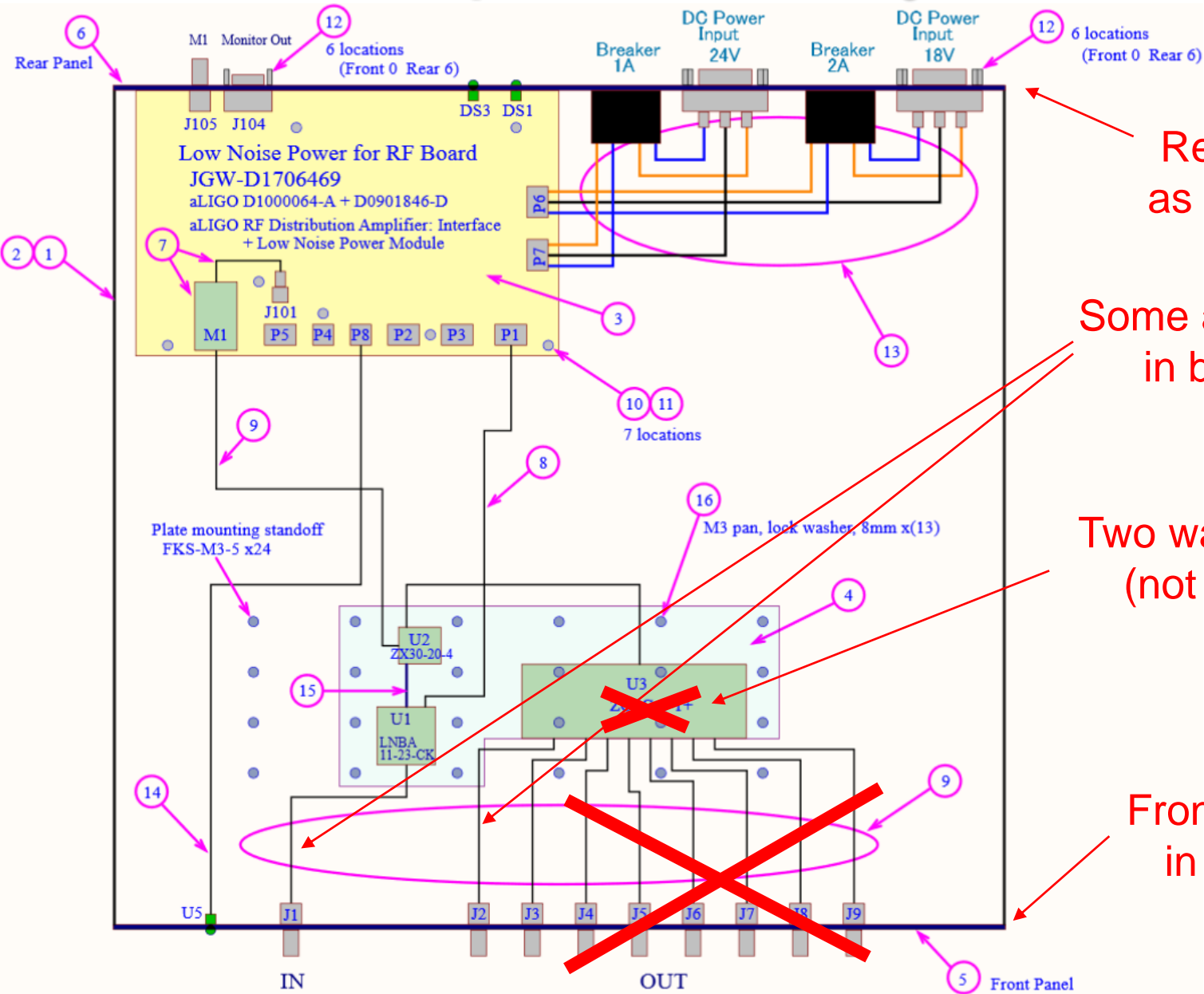
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Summary

- RF Amplifier for driving EOM
- Basically same as RF Distribution Amplifier ([JGW-D1706462](#))
 - But 2-way splitter instead of 8-way
 - Include some attenuators to tune modulation depth (could be voltage controlled one)
 - Might include some bandpass filters
 - Different front panel, same rear panel
- Make at least 3 chassis for f1,f2,f3
 - f1: 16.881 MHz (split into two)
 - f2: 45.016 MHz (no split)
 - f3: 56.270 MHz (split into two)
- RF parts will be prepared and assembled by MIF/IOO

Top Assembly Plan

[JGW-D1706462](#)



Rear panel same as [JGW-D1706468](#)

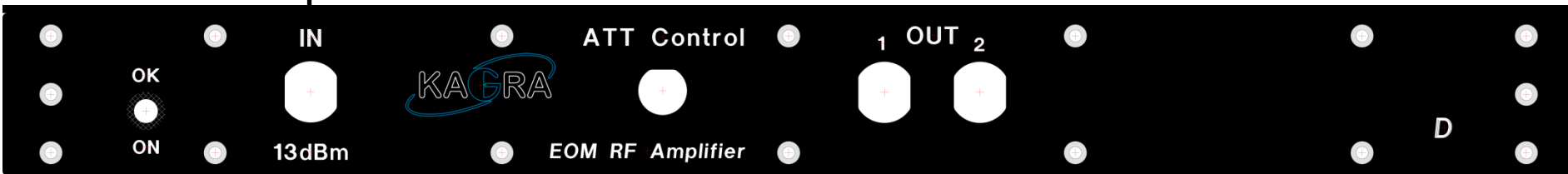
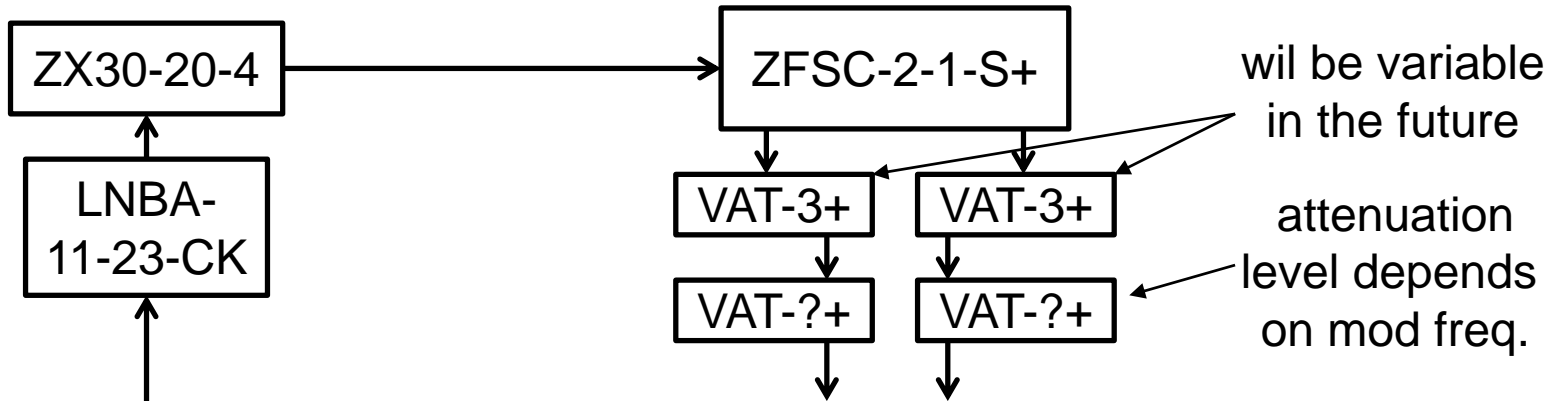
Some attenuators in between

Two way splitter (not 8-way)

Front panel plan in next page

Front Panel and RF Chain

- Design available at [JGW-D1809208](https://www.jgwireless.com/JGW-D1809208)



RF input (N)

Two RF outputs (N)

- Rear panel same as [JGW-D1706468](https://www.jgwireless.com/JGW-D1706468)

Voltage input for voltage controlled attenuator (BNC)

* We might want to isolate this connector from chassis

Parts Prepared by MIF/IOO

- U1: RF amplifier [Wenzel LNBA-11-23-CK-100-15](#) (in hand)
- U2: RF coupler [Mini Circuits ZX30-20-4](#) (in hand)
- U3: two-way RF splitter [Mini Circuits ZFSC-2-1-S+](#)

- RF attenuators ([Mini Circuits VAT-1+](#) etc)
- Voltage controlled RF attenuators ([Teledyne GC2510](#) ?)
- Bandpass filters (TBD)

- **TO BE DISCUSSED**
 - Mounting plate? (like [JGW-D1706464](#))
 - Connectors and cables (semi-rigid SMA cables)?

Variations

- f1: 16.880962 MHz
in -> amplifier -> splitter -> -3dB (variable) -> -4dB -> out
-> -3dB (variable) -> -5dB -> out
- f2: 45.015898 MHz
in -> amplifier -> splitter -> -3dB (variable) -> (-5dB) -> out
(-5dB attenuator for if no MZM)
- f3: 56.269873 MHz
in -> amplifier -> splitter -> -3dB (variable) -> -6dB -> out
-> -3dB (variable) -> -7dB -> out