

**EXHIBIT A**

**PARTS LIST AND TUNE-UP PROCEEDURE**

**NV7930E/V OFDM/DMQ-T (MEDIAFLO)  
9.3-KILOWATT TRANSMITTER**



**ROHDE & SCHWARZ**

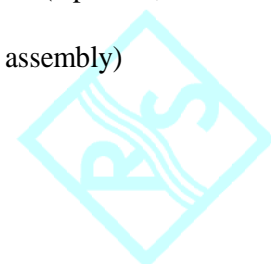
## PARTS LIST

The NV7000E/V series transmitter may be sub-divided into the following components:

- 1) Per each NV 700 Exciter (one cabinet frame per transmitter, installed in first cabinet, each cabinet frame can accommodate two exciters)

<u>Part Number</u> (Rohde & Schwarz, unless otherwise noted.)	<u>Description</u>
a) 2091.1050.12	Encoder Module
b) 2083.6540.45	Modulator Module
c)	Equalizer/Precorrector Module (factory paired with Modulator)
d) 2083.6004.12	Synthesizer Module (with optional GPS Receiver)
e) 2083.5314.12	Exciter Power Supply (one per exciter, up to two per cabinet frame)
f) 2080.5659.02	CCU (Central Control Unit module, one per exciter cabinet frame)
g) 2080.4800.00	CCU Power Supply (one per exciter cabinet frame)
2) Transmitter Cabinet	(up to three cabinets per transmitter as covered by this application)
a) 2069.7007.xx	Input Splitter
b) 2082.9000.02	VH602A2 UHF Power Amplifier (up to eight per cabinet)
c) 2069.0750.xx	Output Power Combiner
d)	Harmonic Filter
e) 2080.7900.03	Rack Controller (one per cabinet)
3) Transmitter, Complete	
a) 2080.6255.xx	Exciter Switcher (V version only, located in first cabinet)
b)	Drive (Exciter Output) Splitter
c) 2080.1001.02	RF Detector
d)	Cabinet Combiner
e) 2075.2903.xx	Directional Coupler
f) 2092.1001.02	Pump Stand Controller (one per two transmitter cabinets, not physically installed in transmitter cabinets)
g) 2094.0002.02	NetCCU 700 Transmitter Control I/P Interface Unit (Optional, installed in first cabinet)
h) 005A76501	Channel "Mask" Filter (Note: this is a Dielectric assembly)

Note: A complete parts list, to the individual component level, can be found in the accompanying Exhibit M, NV7930 Maintenance Manual Volume 1 and Exhibit N, NV7930 Maintenance Manual Volume 2.



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## Tune-Up Information:

The NV7000 family of transmitters is broadband in design and therefore requires no tuning as such. Each individual transmitter is put through extensive testing at the factory on the customer's designated operating frequency to insure proper operation. The transmitter commissioning process calls for the verification of the factory set-ups. Following is an outline of the requirements:

### COMMISSIONING OF THE TRANSMITTER

- 1) Requirements For Putting Into Operation
  - a) Verify Rack Wiring Interconnect
  - b) Checks Response Settings (programmable circuit protectors) of Power Distribution And Pump Unit
  - c) Verify Transmitter Rack/Cabinet A Internal Wiring Connections
  - d) Verify Transmitter Racks/Cabinets B And C Internal Wiring Connections
  - e) Rack Controllers Configuration (Racks A, B And C)
  - f) Jumpers On Motherboard
- 2) Switching On The Transmitter
  - a) Exciter Turn On
  - b) Settings In The CCU Menu Of The Exciter
  - c) Settings In The Exciter Menu  
(Synthesizer, Modulator/Precorrector, Encoder)
  - d) Settings In The Exciter Amplifier Submenu
  - e) Settings In The Exciter Cooling Submenu
- 3) Checking The Exciter Output Power
- 4) Putting The Cooling System Into Operation
  - a) Filling The Cooling Systems With Coolant
  - b) Adjustments Of Cooling System
- 5) Putting The Amplifiers Into Operation
  - a) Switching On The Amplifiers
  - b) Amplifier Adjustment
  - c) Phase Adjustment Of Output Stages
  - d) Amplifier Adjustment
- 6) Setting RF Displays And Thresholds
  - a) Setting Forward And Reflected Power Monitoring
  - b) Setting The Forward Power Threshold
  - c) Verify Band Occupancy (Mask Filter Response)
- 7) Emergency Operation, Verification and Adjustment
- 8) Remote Control Function Verification

A complete step-by-step discussion of the start-up and adjustment steps to put the transmitter into operation, as outlined above, can be found in Exhibit K, NV7930 Installation and Commissioning Manual, Chapter 4, that accompanies this filing. Also check Exhibit L, NV7930 Operating Manual for adjustment procedures specific to the DMQ-T/MediaFLO configuration.

