



December 18, 2013

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: Ex Parte Filing
PS Docket No. 13-209

Dear Ms. Dortch:

This is to advise that on December 16, Jose Martin, Chief Executive Officer, PowerTrunk, Inc., and Patrick McPherson and Ken Keane, counsel for PowerTrunk, met with Michael Wilhelm, Deputy Chief, Policy and Licensing Division, Public Safety and Homeland Security Bureau, and Brian Marengo and John Evanoff of the Policy and Licensing Division, regarding PowerTrunk's position in the above-referenced proceeding.

PowerTrunk first addressed the freeze on the acceptance of applications for equipment certification or licensing of 800 MHz NPSPAC digitally-modulated equipment where the equipment does not conform to emission Mask H, or is not capable of analog FM modulation on the mutual aid channels. The PowerTrunk representatives urged that, with respect to the analog FM issue, the freeze was not applicable to PowerTrunk due to the fact that PowerTrunk has received authorization for its TI D-LMR subscriber equipment that includes analog FM capability for mutual aid purposes. The PowerTrunk representatives supplied a copy of the equipment authorization.

PowerTrunk also observed that a freeze was not warranted for Mask H reasons. In this regard, it observed that opening comments agreed with PowerTrunk that Mask B was not intended to be used only with analog devices, or Mask H only with digital devices; rather, use of the one Mask versus the other, depends on whether the unit in question has a low-pass filter -- or not. Thus, the Commission has certificated numerous technologies with low-pass filters for NPSPAC channels over the years, including digital technologies, pursuant to Mask B, equipment that also exceeds Mask H.

PowerTrunk pointed out that Mask B is reserved for that equipment which will never trespass the boundaries of such Mask as the audio input frequency is cut off by an audio low-pass filter (such as TI D-LMR), while Mask H is intended to prevent equipment which, in absence of more stringent boundaries, could indeed be capable of exceeding Mask B's limits according to its peak frequency deviation as treble sounds can generate significant spectral components outside a 25 kHz-wide centered channel because non-filtered audio's cutoff frequency is as high as 15 kHz (e.g. such as with commercial FM broadcasting stations).

PowerTrunk also observed that “analog” and “digital” are commercial names arbitrarily used by the vendors without any restriction or scrutiny. Most modern electronic technologies include both analog and digital components. What matters in the context of emission mask compliance is not whether the equipment is labelled “analog” or “digital.” What matters is whether the radiated signal exceeds the boundaries of the applicable emission mask and the occupied bandwidth limit -- however that signal may have been generated. To tie out-of-band emission rules to whether the equipment is analog or digital is administratively self-defeating. This is why the bright-line test used by the Commission in Rule 90.210 -- whether the equipment has a low-pass filter, or not -- is the only logical approach. Indeed, should the Commission change Section 90.210 of the rules as proposed, all equipment, whether “analog” or “digital” (or hybrid) which is not compliant with Mask H, should be prohibited in the NPSPAC spectrum -- otherwise, “interference” (understood as a given equipment’s radiation outside Mask H) would be deemed acceptable if generated by analog means but not if caused by digital means. Underscoring the anomaly such a change would involve, reference is made again to the evidence of analog equipment which is not compliant with Mask H and which is extensively used in the NPSPAC spectrum. Thus, equity would demand that, if there should have been any freeze at all (there should not have been), it should have been imposed on all equipment, either analog or digital, whose spectrum exceeds the boundaries of Mask H.

PowerTrunk further observed that claims that the Rules should be changed to require compliance with Mask H based on an asserted “industry practice,” was no more than a call for the Commission to enshrine a form of market exclusion to the major detriment of public safety users who will be deprived of the benefits and cost savings of TI D-LMR technology.

In response to a staff question as to whether PowerTrunk’s equipment could be modified to comply with Mask H, PowerTrunk explained that modifying TETRA-based equipment, including TI D-LMR, in an effort to comply with Mask H is impossible as linear modulation schemes (such as TETRA’s) have not been designed under the limitations of legacy non-linear modulation schemes (such as OpenSky’s). Linear modulation allows substantial increases in spectrum efficiency as data throughput is practically doubled while using the same bandwidth. For such purpose, TETRA-based equipment’s spectrum shape does not have anything to do with Mask H’s shaping whose intent is preventing harmful interference caused by equipment without an audio low-pass filter.

PowerTrunk reiterated the points in its opening and Reply Comments, including that the Regional Planning Committees were quite capable of coordinating use of TI D-LMR equipment just as they coordinated the many other types of equipment referenced above, and that, indeed, this is exactly what the Commission has intended as the RPCs’ role. For example, certain Mask H-compliant equipment such as 4-slot OpenSky radiates well over TIA’s interference-free standard threshold (the same threshold the Commission has adopted for 12.5 kHz-wide channels in the narrowband portion of the 700 MHz band), and thus causes interference in the adjacent channels. The RPCs can use the same tools they’ve traditionally used for coordination of OpenSky systems, in coordination of TI D-LMR and other technology systems, as long as they comply with existing Section 90.210 of the Commission’s Rules.

PowerTrunk also urged, with respect to a possible change in Rule 90.210, that both Open Sky and TI-DLMR require three NPSPAC channels. While Open Sky may use less of the adjacent channels than TI-DLMR, the channels cannot be split to match what Open Sky uses -- in effect, they are fully occupied for coordination purposes within its exclusion zone whose size is not necessarily dissimilar to that of TI D-LMR according to a wide variety of network design criteria and types of terrain.

Finally, if, despite everything in its Comments and ex parte presentation, the Commission is of the view that the emission mask Rules need to be changed, it should adopt the TIA standard as it did for 12.5 kHz-wide channels in the 700 MHz band and, again, require all vendors -- and all technologies, analog and digital -- to meet it.

The PowerTrunk representatives supplied copies of the documents attached.

A copy of this letter is being filed in the above-referenced proceeding.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Jose Martin", is written over a circular blue stamp or seal.

Jose Martin
Chief Executive Officer

Cc: Michael Wilhelm
Brian Marengo
John Evanoff

TCB

GRANT OF EQUIPMENT AUTHORIZATION

TCB

Certification
Issued Under the Authority of the
Federal Communications Commission
By:

Bay Area Compliance Laboratory Corp.
1274 Anvilwood Avenue
Sunnyvale, CA 94089

Date of Grant: 04/17/2013
Application Dated: 04/17/2013

Teltronic S.A.U.
Poligono Malpica Calie F
Parceia 12
Zaragoza, 50057
Spain

Attention: Jose Roman

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: WT7PTHHT500760B

Name of Grantee: Teltronic S.A.U.

Equipment Class: Licensed Non-Broadcast Transmitter Held to Face
Notes: Digital Handheld Terminal

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
	90	769.0 - 775.0	1.0	1.0 PM	20K0D7W
	90	769.0 - 775.0	1.0	1.0 PM	20K0D7E
	90	769.0 - 775.0	1.0	1.0 PM	20K0D7D
	90	769.0 - 775.0	1.0	1.0 PM	20K0Q7W
	90	769.0 - 775.0	1.0	1.0 PM	20K0Q7E
	90	769.0 - 775.0	1.0	1.0 PM	20K0Q7D
	90	769.0 - 775.0	1.0	1.0 PM	8K10F1E
	90	769.0 - 775.0	1.0	1.0 PM	8K10F1D
	90	769.0 - 775.0	1.0	1.0 PM	8K10F1W
	90	799.0 - 805.0	1.0	1.0 PM	20K0D7W
	90	799.0 - 805.0	1.0	1.0 PM	20K0D7E
	90	799.0 - 805.0	1.0	1.0 PM	20K0D7D
	90	799.0 - 805.0	1.0	1.0 PM	20K0Q7W
	90	799.0 - 805.0	1.0	1.0 PM	20K0Q7E
	90	799.0 - 805.0	1.0	1.0 PM	20K0Q7D
	90	799.0 - 805.0	1.0	1.0 PM	8K10F1E
	90	799.0 - 805.0	1.0	1.0 PM	8K10F1D
	90	799.0 - 805.0	1.0	1.0 PM	8K10F1W
	90	806.0 - 824.0	1.0	1.0 PM	20K0D7W
	90	806.0 - 824.0	1.0	1.0 PM	20K0D7E
	90	806.0 - 824.0	1.0	1.0 PM	20K0D7D

90	806.0 - 824.0	1.0	1.0	PM	20K0Q7W
90	806.0 - 824.0	1.0	1.0	PM	20K0Q7E
90	806.0 - 824.0	1.0	1.0	PM	20K0Q7D
90	806.0 - 824.0	1.0	1.0	PM	14K0F3E
90	806.0 - 824.0	1.0	1.0	PM	16K0F3E
90	851.0 - 869.0	1.0	1.0	PM	20K0D7W
90	851.0 - 869.0	1.0	1.0	PM	20K0D7E
90	851.0 - 869.0	1.0	1.0	PM	20K0D7D
90	851.0 - 869.0	1.0	1.0	PM	20K0Q7W
90	851.0 - 869.0	1.0	1.0	PM	20K0Q7E
90	851.0 - 869.0	1.0	1.0	PM	20K0Q7D
90	851.0 - 869.0	1.0	1.0	PM	14K0F3E
90	851.0 - 869.0	1.0	1.0	PM	16K0F3E
90	809.0 - 824.0	1.0	1.0	PM	22K0D7W
90	809.0 - 824.0	1.0	1.0	PM	22K0D7E
90	809.0 - 824.0	1.0	1.0	PM	22K0D7D
90	809.0 - 824.0	1.0	1.0	PM	22K0Q7W
90	809.0 - 824.0	1.0	1.0	PM	22K0Q7E
90	809.0 - 824.0	1.0	1.0	PM	22K0Q7D
90	854.0 - 869.0	1.0	1.0	PM	22K0D7W
90	854.0 - 869.0	1.0	1.0	PM	22K0D7E
90	854.0 - 869.0	1.0	1.0	PM	22K0D7D
90	854.0 - 869.0	1.0	1.0	PM	22K0Q7W
90	854.0 - 869.0	1.0	1.0	PM	22K0Q7E
90	854.0 - 869.0	1.0	1.0	PM	22K0Q7D

Power listed is conducted. This device must be restricted to work related operations. All qualified end-users of this device must have the knowledge to control their exposure conditions and/or duration to comply with the SAR limit and requirements. A label, as described in this filing, must be displayed on the device to direct users to specific training information. Body-worn operating configuration is limited to the specific belt-clip supplied for use with this product described in this filing. End-users must be informed of the body-worn operating requirements for satisfying RF exposure compliance. The highest reported SAR values are Head: 0.61 W/Kg, Body-worn: 0.33 W/Kg, Face Held: 0.77 W/Kg respectively.

Power output is variable from the value listed down to 0.03 watts or 0.31 watts, depending on the occupied bandwidth. Certification is approved pursuant to the Report and Order FCC 12-114.

MKR 824.937 5 MHz
34.40 dBm

REF 42.0 dBm
ATTEN 10 dB

10 dB/
708 PK
OFFSET
31.3
dB

dBc

Mask H
Mask B

CENTER 824.937 MHz
RES BW 300 Hz
SPAN 200 kHz
VBN 300 Hz
SWP 3.00 sec

F (KHz)

Power / Channel

Modulation:

High / High Channel of Lower Band Sp

Voice: 2500 Hz (14K0F3E)

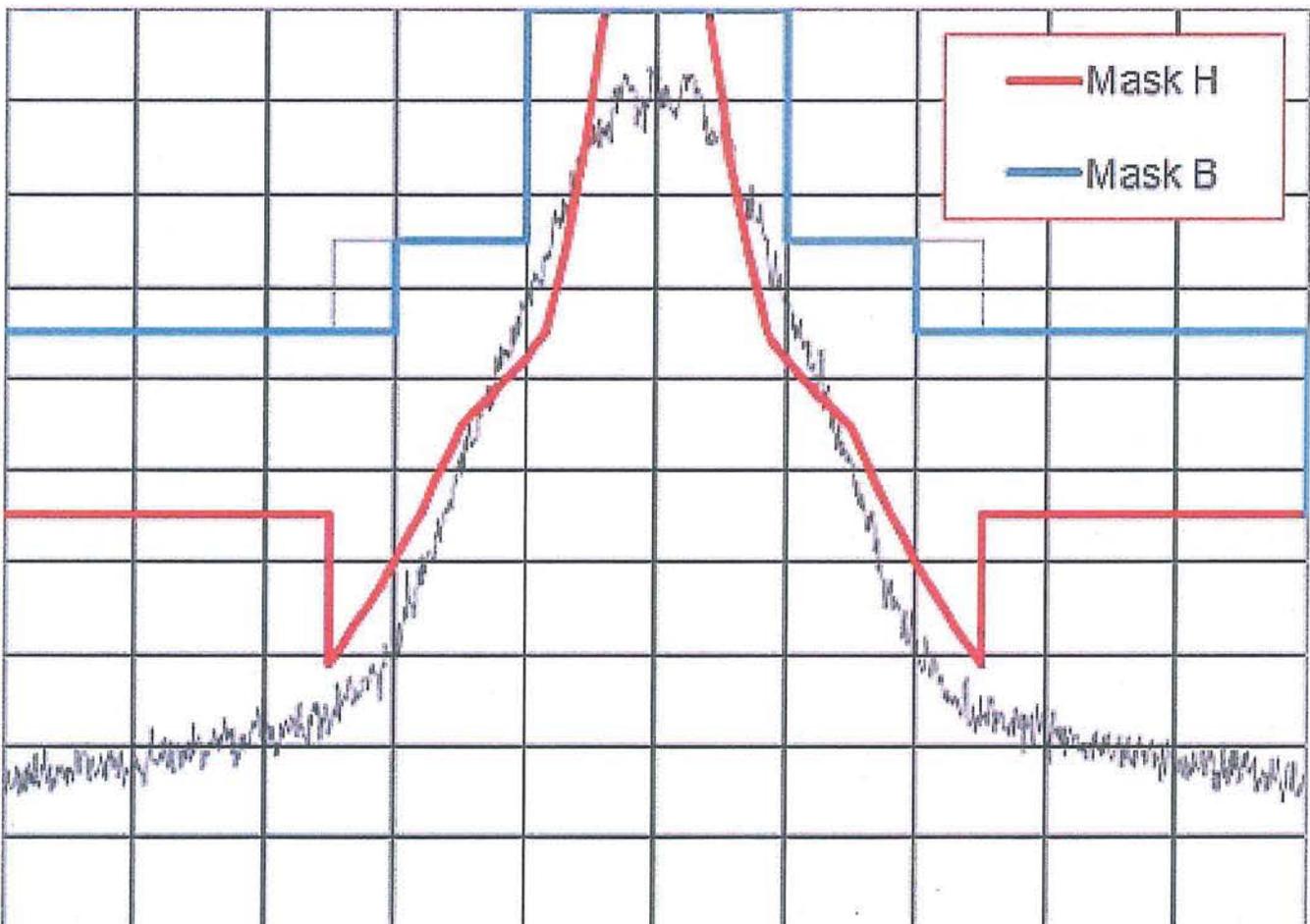
Mask: B, VHF/UHF 25kHz, w/LPF

MKR 815.499 4 MHz
35.00 dBm

REF 41.7 dBm
ATTEN 20 dB

10 dB/
POS PK
OFFSET
34.1
dB
dBc
CORR'D

— Mask H
— Mask B



CENTER 815.499 MHz
RES BW 300 Hz
VBW 300 Hz
SPAN 100 kHz
SWP 3.00 sec

POWER: HIGH
MODULATION: GMSK 19200 BITS PER SECO
MASK: B, VHF/UHF 25kHz,
w/LPF