45,3% lighter
than average 10,3 mm
full copper cables

Ham Radio
Pro Cables
M&P
AIRBORNE
MESSI & PAOLONI

19dB @ 2400 Mhz
by far the most performant
of its class (10,3 mm cables)

M&P AIRBORNE 10 /.400"

JACKET:
UV shielded polyethylene
for direct burial and outdoor use
overall Ø 10,3mm ± 0,15
(0.405 inches ± 0.0059)

REACTIVE BRAID:
85% SCREENING - 192 wires of copper clad aluminium made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING
First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends

Direct Burial

CE
Pb
RoHS Compliant 2002/95/EC

DIELECTRIC:
High pressure physical injection
foamed polyethylene
TRIPLE LAYER
overall Ø 7,3 mm ± 0,05 (0.287 inch. ± 0.0019)

INNER CONDUCTOR:
made of copper clad aluminium
overall Ø 2,78 mm ± 0,05 (Ø 0.109 inches ± 0.0019)

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	0,6	0,2
3,5 MHz	0,8	0,2
7 MHz	1,0	0,3
10 MHz	1,2	0,3
14 MHz	1,3	0,4
21 MHz	1,7	0,5
28 MHz	1,9	0,5
50 MHz	2,4	0,7
100 MHz	3,5	1,0
144 MHz	4,2	1,2
200 MHz	5,0	1,5
400 MHz	7,2	2,1
430 MHz	7,6	2,3
800 MHz	10,4	3,1
1000 MHz	11,8	3,6
1296 MHz	13,6	4,1
2400 MHz	19,2	5,8
3000 MHz	21,6	6,5
4000 MHz	25,6	7,8
5000 MHz	29,2	8,9
6000 MHz	32,8	10,0
7000 MHz	35,6	10,8
8000 MHz	38,6	11,7
10.000 MHz	44,6	13,5
12.000 MHz	50,2	15,3

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 103mm (4.05 in) single bend (choke): 65mm (2.56 in)
Temperature:	-45°C to +70°C (-49°F to +158°F)
Capacitance:	74 pF/m ± 2 (22.6 pF/ft ± 2)
Velocity ratio:	87%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Screening Class:	A++
Inner conductor resistance:	4,4 Ohm/Km (1.3 Ohm/1000ft)
Outer conductor resistance:	12 Ohm/Km (3.7 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight (100m/100ft):	7,1 Kg (4.8 lb)
Maximum peak power:	14.500 WATT
Connectors:	UHF (PL), N, BNC, SMA, TNC, 7/16

SRL

0,3-600 MHz	>30 dB
600-1200 MHz	>25 dB
1200-2000 MHz	>20 dB

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	10831 W	430 MHz	944 W
3,5 MHz	8471 W	800 MHz	692 W
7 MHz	6667 W	1000 MHz	610 W
10 MHz	6000 W	1296 MHz	529 W
14 MHz	5180 W	2400 MHz	375 W
21 MHz	4114 W	3000 MHz	333 W
28 MHz	3731 W	4000 MHz	281 W
50 MHz	2939 W	5000 MHz	247 W
100 MHz	2045 W	6000 MHz	220 W
144 MHz	1710 W	7000 MHz	202 W
200 MHz	1440 W	8000 MHz	187 W
400 MHz	992 W	10.000 MHz	161 W

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); CPR305/11 (EN50575:2014 - DoP number: MP0096)

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-AIRBORNE 10, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 71.2% of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies. **REMEMBER: Make sure to match the line accurately!**

M&P-AIRBORNE 10 /.400"

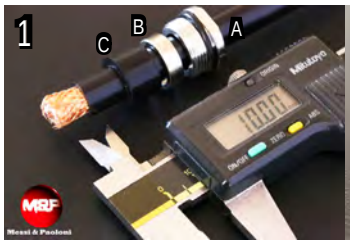
	length --->		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2	feet
	Wave length	MHz	5	10	15	20	25	35	50	75	100	130	160	200	300	m
Frequencies / Frequenze	85.71 m	3,5	98,9	98,0	97,0	96,1	95,1	93,3	90,6	86,2	82,1	77,4	73,0	67,5	55,5	Useful signal output (residual power %)
	42.85 m	7	98,7	97,4	96,2	95,0	93,9	91,6	88,2	82,9	77,9	72,3	67,1	60,7	47,3	
	21.42 m	14	98,3	96,8	95,2	93,7	92,2	89,3	85,1	78,6	72,5	65,9	59,8	52,6	38,2	
	10.71 m	28	97,7	95,6	93,5	91,4	89,4	85,5	80,0	71,6	64,0	56,0	49,0	41,0	26,3	
	6 m	50	97,1	94,4	91,8	89,2	86,7	82,0	75,3	65,4	56,8	47,9	40,5	32,3	18,3	
	2 m	144	95,2	90,7	86,4	82,3	78,4	71,2	61,6	48,3	37,9	28,3	21,2	14,4	5,4	
	69 cm	430	91,5	83,8	76,8	70,3	64,4	54,0	41,5	26,8	17,2	10,1	5,9			
	23.1 cm	1296	84,9	72,5	61,9	52,8	45,1	32,8	20,3	8,9	3,7					
	12.5 cm	2400	78,6	62,7	49,9	39,7	31,5	19,7	9,4							
	10 cm	3000	76,4	59,2	45,8	35,4	27,3	16,0	6,7							
	7.5 cm	4000	72,9	53,9	39,7	29,2	21,3	11,1	3,7							
	6 cm	5000	69,5	49,1	34,5	24,1	16,6	7,5								
	5 cm	6000	66,6	45,0	30,2	20,1	13,1	5,1								
	3.75 cm	8000	61,0	38,0	24,4	13,7	7,7									
	3 cm	10.000	49,8	25,8	11,4											
	2.5 cm	12.000	46,1	21,5	7,7											

M&P-AIRBORNE 10 /.400" Power Handling/Temperature (in Continuous Carrier)

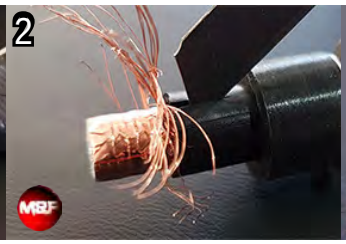
	Wave length	MHz	Temperature C° / F°										
			-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158	
Frequencies / Frequenze	166.66 m	1,8	13300	13300	13300	13300	12900	12174	10831	9239	7647	6065	WATT
	85.71 m	3,5	13112	12672	12299	11520	10605	9521	8471	7225	5980	4744	
	42.85 m	7	10320	9973	9680	9067	8347	7493	6667	5687	4707	3733	
	30 m	10	9288	8976	8712	8160	7512	6744	6000	5118	4236	3360	
	21.42 m	14	8018	7749	7521	7045	6485	5822	5180	4418	3657	2901	
	14.28 m	21	6369	6155	5974	5595	5151	4624	4114	3509	2905	2304	
	10.71 m	28	5775	5581	5417	5074	4671	4193	3731	3182	2634	2089	
	6 m	50	4549	4396	4267	3997	3679	3303	2939	2507	2075	1646	
	3 m	100	3166	3060	2970	2782	2561	2299	2045	1745	1444	1145	
	2.08 m	144	2647	2558	2483	2326	2141	1922	1710	1459	1207	958	
	1.5 m	200	2229	2154	2091	1958	1803	1619	1440	1228	1017	806	
	75 cm	400	1535	1484	1440	1349	1242	1115	992	846	700	555	
	69 cm	430	1461	1412	1370	1283	1181	1061	944	805	666	528	
	37.5 cm	800	1072	1036	1005	942	867	778	692	591	489	388	
	30 cm	1000	945	913	886	830	764	686	610	520	431	342	
	23.1 cm	1296	820	792	769	720	663	595	529	452	374	296	
	12.5 cm	2400	581	561	545	510	470	422	375	320	265	210	
	10 cm	3000	516	499	484	453	417	375	333	284	235	187	
	7.5 cm	4000	435	421	408	383	352	316	281	240	199	158	
	6 cm	5000	382	369	358	335	309	277	247	210	174	138	
	5 cm	6000	340	328	319	299	275	247	220	187	155	123	
	4.2 cm	7000	313	303	294	275	253	227	202	173	143	113	
	3.75 cm	8000	289	279	271	254	234	210	187	159	132	104	
	3.3 cm	9000	269	260	252	236	217	195	173	148	122	97	
	3 cm	10.000	250	242	234	220	202	181	161	138	114	90	

Connector assembly

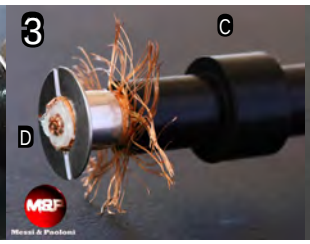
Connector “N” type



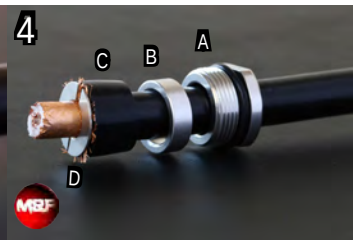
Insert in the cable components A, B, C and immediately after, make a circular cut on the black PVC jacket at the indicated length shown in the caliber (in mm). Subsequently remove it.



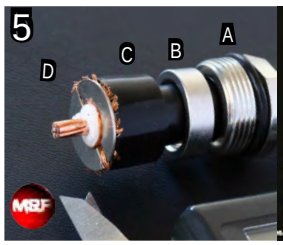
Make a cut on the jacket of 7mm, than rotate the cable of 180° and make an other equal cut.



Insert component D after having opened the braid as shown in the picture. Push component D between the foil and the braid until it stops against the black PVC jacket.

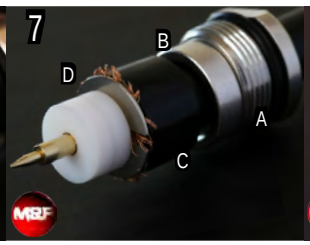


Flatten the wires as shown in the picture and cut the excess.



Cut and remove the tape and dieletric for a length as shown in the picture (6mm).

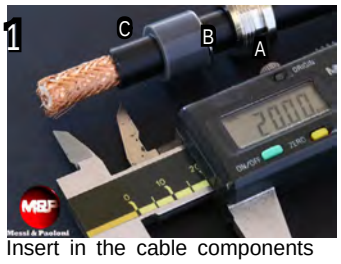
Insert one of the two teflon discs and subsequently the central pin. Solder the pin to the inner conductor, inserting tin in the provided hole. Avoid heating the pin for a too long time in order not to transfer excessive heat to the highly conductive copper underneath. Excessive heat deforms the dielectric which is made of foam PE and not in teflon!.



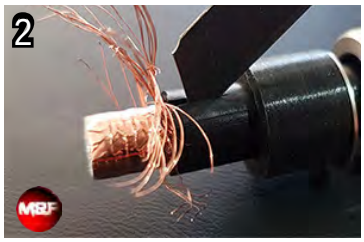
Insert the second teflon disc as shown in the picture.

Insert the connector and fasten accurately until the o-ring present in component A, will be pressed against the connector body. Inside, the rubber component C (pic. 1) will expand, granting optimal sealing against moisture and a perfect contact to ground.

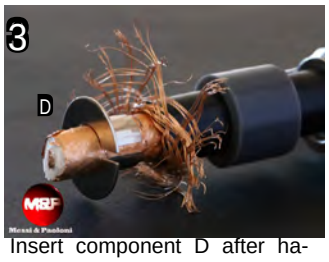
Connector “UHF/PL” type



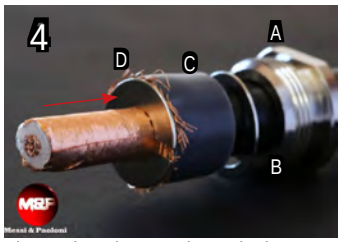
Insert in the cable components A, B, C and immediately after, make a circular cut on the black PVC jacket at the indicated length shown in the caliber (in mm). Subsequently remove it.



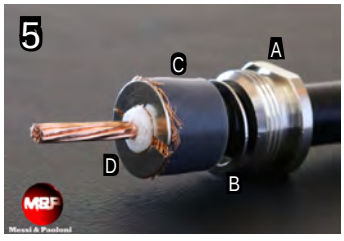
Make a cut on the jacket of 7mm, than rotate the cable of 180° and make an other equal cut.



Insert component D after having opened the braid as shown in the picture. Push component D between the foil and the braid until it stops against the black PVC jacket.



Flatten the wires as shown in the picture and cut the excess.



Cut and remove the tape and dieletric for a length as shown in the picture (6mm).

Insert the connector and solder it with tin to the inner conductor (see picture above). Avoid heating the pin for a too long time in order not to transfer excessive heat to the highly conductive copper underneath. Excessive heat deforms the dielectric which is made of foam PE and not in teflon!.

Fasten together the connector and component A, until it will be pressed against the connector body. Inside, the rubber component C (pic. 1) will expand, granting optimal sealing against moisture and a perfect contact to ground.

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CONNECTORS for 10,3mm/.400” cables

N solder male

N solderless male

N solderless female

N at 90°

NO braid soldering needed!

Perfect match with M&P PRO cables! 105dB (SA)

Humidity proof compression design!

Dramatic suppression of the background noise!

N crimp male

UHF/PL solder male

UHF/PL solder female

CONNECTORS for 10,3mm/.400” cables

PL259 AMPHENOL©

NO braid soldering needed!

Perfect match with M&P PRO cables! 105dB (SA)

BNC solder male

SMA solder male

Humidity proof compression design!

Dramatic suppression of the background noise!

TNC solder male

TNC crimp male

7/16

Heat Suppressor