



WMS4500 MULTICHANNEL SETUP GUIDE
SCHEMATIC & PART LIST 1-32 CHANNEL



Introduction

The following schematics will help you to easily set up multi channel systems.

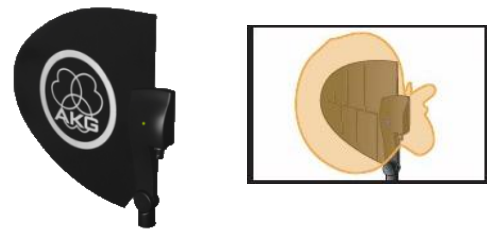
Please use the equipment that is specified in the schematics only.

For your convenience and understanding, we've added technical information and part lists. You can use this part lists when ordering the system you require! If you need any help regarding the frequency regulations or if your particular situation doesn't allow the installation of a standard system, please do not hesitate to contact us at sales@akg.com.

All the WMS4500 systems in this document are designed with active antennas that can be used in all venues with a 20m RG58 antenna cable.

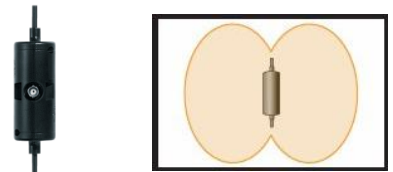
SRA2 B/W active directional antenna

For venues (tour sound & installs) cover a large area (up to 150m, 500ft) like music halls, stadiums and other open air applications.



RA4000 B/W active omni-directional antenna

For venues without a designated transmitter area and up to 100m/330ft (free viewing direction). Ideal for conference rooms, multi purpose halls, houses of worship etc.



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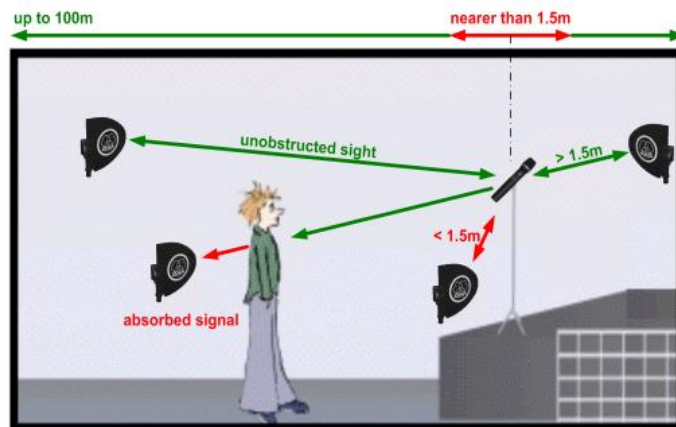
Technical Information

Wireless Basics

- Every wireless microphone system has to operate on **one** specific frequency
- Transmitter and receiver of a system need to work on the **same** frequency
- Two transmitters **cannot** be used with one receiver at the same time

Receiver/Antenna Placement

- Direct line of sight between transmitter and receiver antenna
- Keep the receiver/antennas at least 5 ft. (1.5 m) away from all transmitters
- Keep the receiver antennas at least 5 ft. (1.5 m) away from any big metal object, wire (particularly wire mesh) or sheet metal structures, walls, ceilings, etc.
- Do not place the antennas in closed areas (behind walls)
- Place the receiver at least 5 ft. (1.5 m) away from any equipment that may emit RF radiation such as lighting racks, fluorescent lamps, digital effect units, or PCs



Squelch

- Standard: Carrier squelch, manual
 - Operates strictly on the signal strength of the signal.
 - If received signal strength drops under the adjustable squelch threshold the audio output is muted
- Advanced: Tone Code (only WMS470/4500)
 - The audio turns on only in the presence of the correct tone code and an adequate signal strength (-100dbm)
 - Lock out of all signals except ones with the correct key.

Intermodulation

Intermodulation is the result of two or more signals of different frequencies being mixed together, forming additional signals that are not harmonic frequencies of either.

By using more than one transmitter simultaneously at the same location, intermodulation happens in the receiver and/or transmitter. These intermodulation products are generated in the bandwidth that you are using.

To avoid intermodulating frequencies, we offer pre-calculated frequencies as presets in the SR450 and SR4500 Receiver. Please, make sure that when setting up a multi channel system, all your receivers are set to the same country preset (NAME) and group. Use the automatic channel function (auto setup) to scan for free frequencies in your venue.

HUB 4000 Q

The HUB 4000 Q adds HiQnet functionality to an AKG wireless system (SR 4500, SST 4 and upcoming devices are supported). For large wireless systems multiple HUB 4000 Q's can be used and controlled from a single computer. With connecting the HUB 4000 Q to a HiQnet network the user is able to monitor and control an AKG wireless system from a computer running System Architect.

HiQnet System Architect

The simple and easy to use user interface of the HUB 4000 Q plug in of System Architect allows the user to setup and configure the wireless system easy and fast. With tools like Auto Setup, Environment Scan, RF Monitor and Device Manager you have all the control over your multi channel WMS system that makes your life easier handling many RF channels.

HiQnet System Architect also allows custom configuration of custom made user interfaces which makes it a perfect tool for installed sound and tour sound applications.

Today's HiQnet system is build from flagship products from Harman Pro brands AKG Acoustics, BSS Audio, Crown International, dbx Professional, JBL Professional, Lexicon Pro, Soundcraft and Studer.

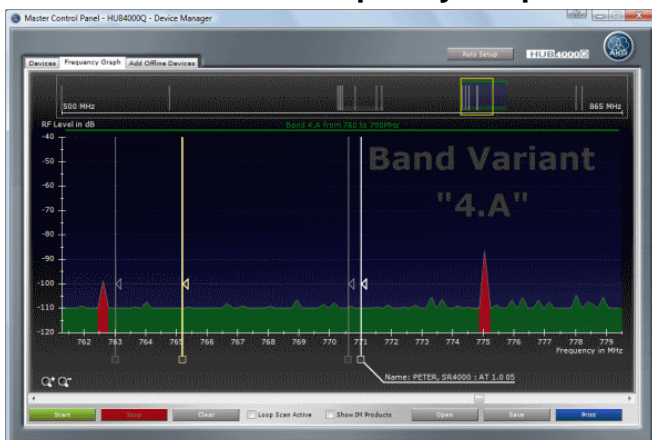
AKG User Interface



Features

- automatic identification of all HUB4000Q's
- Simple and easy to use channel-oriented user interface
- Fast and intuitive setup and configuration of frequency management with Auto Setup, Environment Scan and Device Manager
- Offline configuration
- Save and load your setup

Environment Scan - Frequency Graph



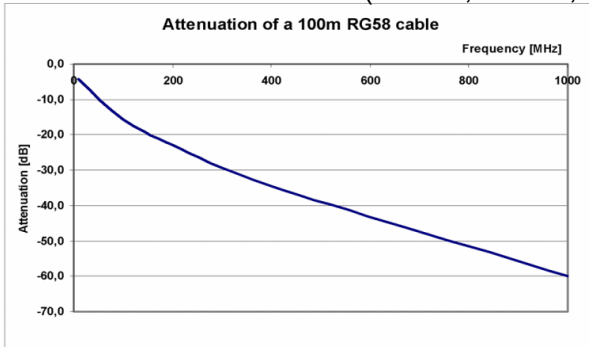
Device Manager - Frequency Management

Device Name	Type	Band var	Locate	Country	Group	Channel	Frequency	Optional	Status	Send To	Receive From	Scan
Node Name: SR SR4 LOW BAND (5 Items)												
HYNAME	SR4000	4.A	Locate	AT	1.0	2	760.000	-100dB	ONLINE	Send To	Receive From	
NDS	SR4000	4.A	Locate	AT	1.0	2	761.200	-100dB	ONLINE	Send To	Receive From	
WLL	SR4000	4.A	Locate	AT	1.0	2	763.600	-100dB	ONLINE	Send To	Receive From	
NDL	SR4000	4.A	Locate	AT	1.0	4	763.000	-100dB	ONLINE	Send To	Receive From	
RCTR	SR4000	4.A	Locate	AT	1.0	5	771.000	-100dB	ONLINE	Send To	Receive From	
Node Name: SR SR4 HIGH BAND (3 Items)												
GUITAR	SR4000	2	Locate	AT	1.0	1	685.000	-100dB	ONLINE	Send To	Receive From	
HYNAME	SR4000	2	Locate	AT	1.0	2	681.200	-100dB	ONLINE	Send To	Receive From	
SAL	SR4000	2	Locate	AT	1.0	2	681.800	-100dB	ONLINE	Send To	Receive From	
Node Name: SR SR4 TOP BAND (9 Items)												
JACK	SST4	7.00	Locate	US	7.A	2	500.100	20mW	ONLINE	Send To	Receive From	
CHRIS	SST4	8.00	Locate	US	8.A	2	575.100	20mW	ONLINE	Send To	Receive From	
STEVE	SST4	6.65	Locate	AT	6.A	2	835.100	20mW	ONLINE	Send To	Receive From	
ALEX	SST4	8.85	Locate	AT	8.A	2	658.900	20mW	ONLINE	Send To	Receive From	
GUIT	SR4000	2	Locate	AT	1.0	4	683.000	-100dB	ONLINE	Send To	Receive From	
BASS	SR4000	2	Locate	AT	1.0	5	691.000	-100dB	ONLINE	Send To	Receive From	
VOXS	SR4000	2	Locate	AT	1.0	6	704.800	-100dB	ONLINE	Send To	Receive From	
PERC	SR4000	2	Locate	AT	1.0	7	708.600	-100dB	ONLINE	Send To	Receive From	

Cable Attenuation

To obtain the best sound possible, you need to have the right RF input level throughout your signal chain. Premium quality wireless systems like the WMS450/470 and WMS4500, offer you adjustable RF-level settings that guarantee to maximise operating distance even when using different cable lengths and different types of cable! For this purpose, AKG's PS4000W antenna splitter, has 3 dip switches that you'll find on the right side of its front panel, behind the AKG logo.

RG58 Cable Attenuation (MKPS, MKA5, MKA20 antenna cable)

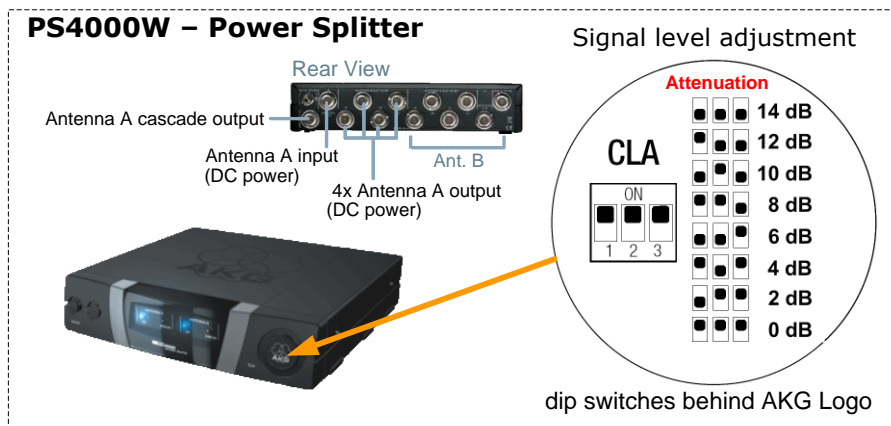


frequency MHz	Dämpfung dB/100m	Dämpfung dB/1m
650	-45,13	-0,45
700	-47,25	-0,47
750	-49,38	-0,49
800	-51,50	-0,52
850	-53,63	-0,54

~50dB/100m

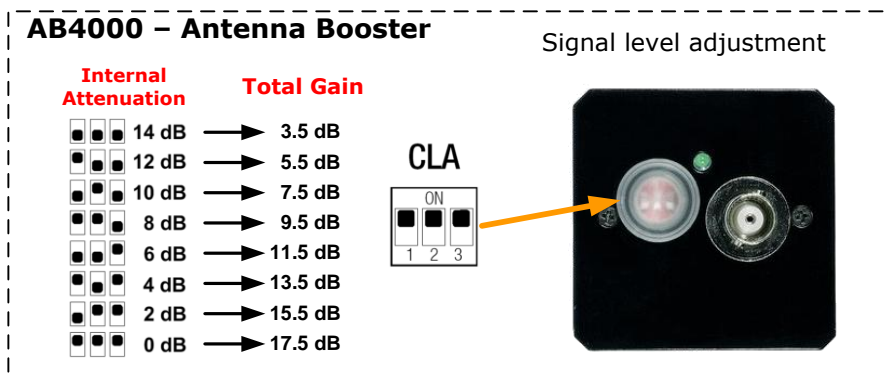
PS4000 dip switch

These switches reduce the input RF level of the antenna input between 0 dB and 14 dB. Levels of all antenna outputs and the cascade (link) output will be reduced.




























AB4000 dip switch

The AB4000 has a fix 17.5dB amplifier in the output stage. The dip switches reduce the input RF level of the AB4000 from 0 dB and -14 dB. AB4000 gets the DC power from the PS4000W or an ASU4000 unit via the antenna cable



PS4000 W dip switch matrix (RG58 cable)

Antenna type & Gain Cable type & Length	Passiv Antennas			Active Antennas	
	 1/4 wave UHF Antenna 0 dB	 RA4000 W 1 dB	 SRA2 W 4-6 dB	 RA4000 BW 17 dB	 SRA2 BW 21.5 dB
MKPS 0.65m / 2ft	0 dB 	0 dB 	-4 dB 		
MKA 5 5m / 16ft	0 dB 	0 dB 	-2 dB 		
MKA 20 20m / 66ft				-8 dB 	-12 dB 
MKA 5 + MKA 20 25m / 82ft				-6 dB 	-10 dB 
2x MKA 20 40m / 132ft				0 dB 	-2 dB 
3x MKA 20 60m / 198ft Antenna Booster AB4000 necessary !				RA4000 BW ↓ 2x MKA 20 ↓ AB4000 0 dB  ↓ 1x MKA 20 ↓ PS4000 -4 dB 	SRA2 BW ↓ 2x MKA 20 ↓ AB4000 0 dB  ↓ 1x MKA 20 ↓ PS4000 -8 dB 
4x MKA 20 80m / 264ft Antenna Booster AB4000 necessary !				RA4000 BW ↓ 2x MKA 20 ↓ AB4000 0 dB  ↓ 2x MKA 20 ↓ PS4000 0 dB 	SRA2 BW ↓ 2x MKA 20 ↓ AB4000 0 dB  ↓ 2x MKA 20 ↓ PS4000 0 dB 

You have to use these PS4000 W dip switch settings for all PS4000 W **directly connected to antennas.**

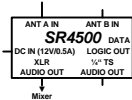
All PS4000 W connected to a PS4000 W link output (cascade) have dip switch setting ON/ON/ON (0dB)



WMS450/470/4500 Component Matrix

WMS Receiver	2x Antennas (e.g. SRA2 B/W or RA4000 B/W) 2x MKA 20 (see PS4000W dip switch matrix) plus...								
	Antenna Components			Power Supplies			PC Monitoring with System Architect		
	PS4000	ZAPD-21	MKPS	PSU4000	AC12 500mA	AC12 2000mA	HUB4000Q	PSU4000	AC12 500mA
2	1	0	4	0	0	1	1	0	1
3	1	0	6	0	0	1	1	0	1
4	1	0	8	0	0	1	1	0	1
5	1	0	10	0	1	1	1	0	1
6	2	0	14	0	0	2	1	0	1
7	2	0	16	0	0	2	1	0	1
8	2	0	18	0	0	2	1	0	1
9	2	0	20	0	1	2	2	0	1
10	3	0	24	1	0	0	2	0	1
11	3	0	26	1	0	0	2	0	1
12	3	0	28	1	0	0	2	0	1
13	3	0	30	1	1	0	2	0	1
14	4	2	36	2	0	0	2	0	0
15	4	2	38	2	0	0	2	0	0
16	4	2	40	2	0	0	2	0	0
17	4	2	42	2	0	0	3	0	2
18	4	2	44	2	0	0	3	1	0
19	5	2	48	2	0	0	3	0	2
20	5	2	50	2	0	0	3	0	2
21	5	2	52	2	0	0	3	1	0
22	5	2	54	2	1	0	3	1	0
23	6	2	58	2	0	0	3	1	0
24	6	2	60	2	0	0	3	1	0
25	6	2	62	2	1	0	4	1	1
26	6	2	64	2	2	0	4	1	1
32	9	0	80	3	0	0	4	1	1
36	9	0	88	3	0	0	5	1	2
48	13	0	120	5	0	0	6	1	1
52	13	0	128	5	0	0	7	2	1

Glossar

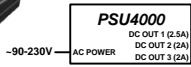


SR4500 – WMS4500 Stationary Receiver



PS4000W – Power Splitter 1:4 (Distribute RF signal and DC Power)

- Splits 1 antenna to 4 receiver
- Antenna cascade(Link) output to send RF-Signal to next PS4000. Cascade max. 3 PS4000.
- If you need more than 12 channels use an ZAPD in front of the first PS4000.



PSU4000 – Power Supply Unit with 3x 12 volt outputs (2.5A and 2A)



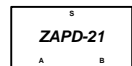
SRA2 B/W – Active Directional Antenna (21.5 dB Gain)



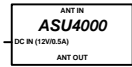
RA4000 B/W – Active Omni-directional Antenna (17 dB Gain)



CU4000 – Charging Unit for WMS4000/4500 (2 transmitter / unit)

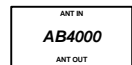


ZAPD-21 – Passive Combiner 2:1 and 1:2



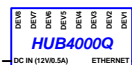
ASU4000 – Antenna Supply Unit

- Supplies up to three active elements (RA4000BW, SRA2BW, AB4000)



AB4000 – Antenna Booster

- 3.5 dB – 17.5 dB amplifier



HUB4000Q – Network Concentrator for 8 devices (SR4500 or SST4)

- Operate with Harman „System Architect“ software - <http://hiqnet.harmanpro.com>

Cable

MKPS – 0.65m/2 feet RG58 antenna cable

MKA5 – 5m/16ft RG58 antenna cable

MKA20 – 20/66ft RG58 antenna cable

0110E01890 – Front mount cable

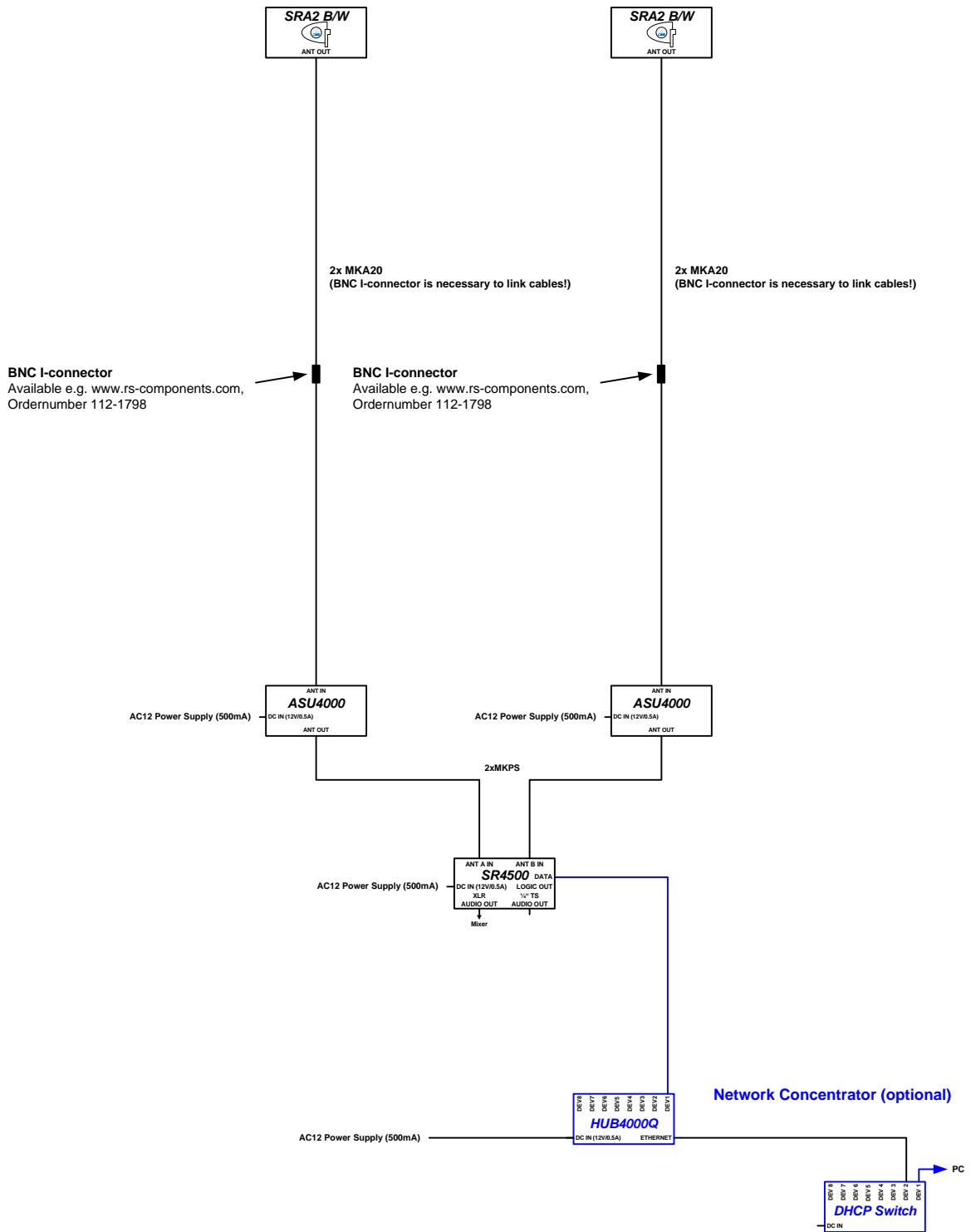
- Install ¼ wave antennas at the front of the rack



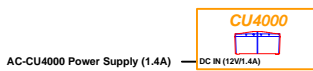
Front mount cable & ¼ wave antenna



1 Channel WMS4500 System With directional antennas & 40m antenna cable (132 feet)



2 HT4500 or PT4500 charging system (optional)



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	1 channel WMS4500 system (SRA2 B/W – Antennas)		



1 Channel WMS4500 System with directional antennas, no PSU4000, no PS4000W

units	description	comment
1	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
1	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
2	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
4	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	ASU4000 (BNC)	Antenna Supply unit for long antenna cables (BNC connector) without AC-Adapter
3	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

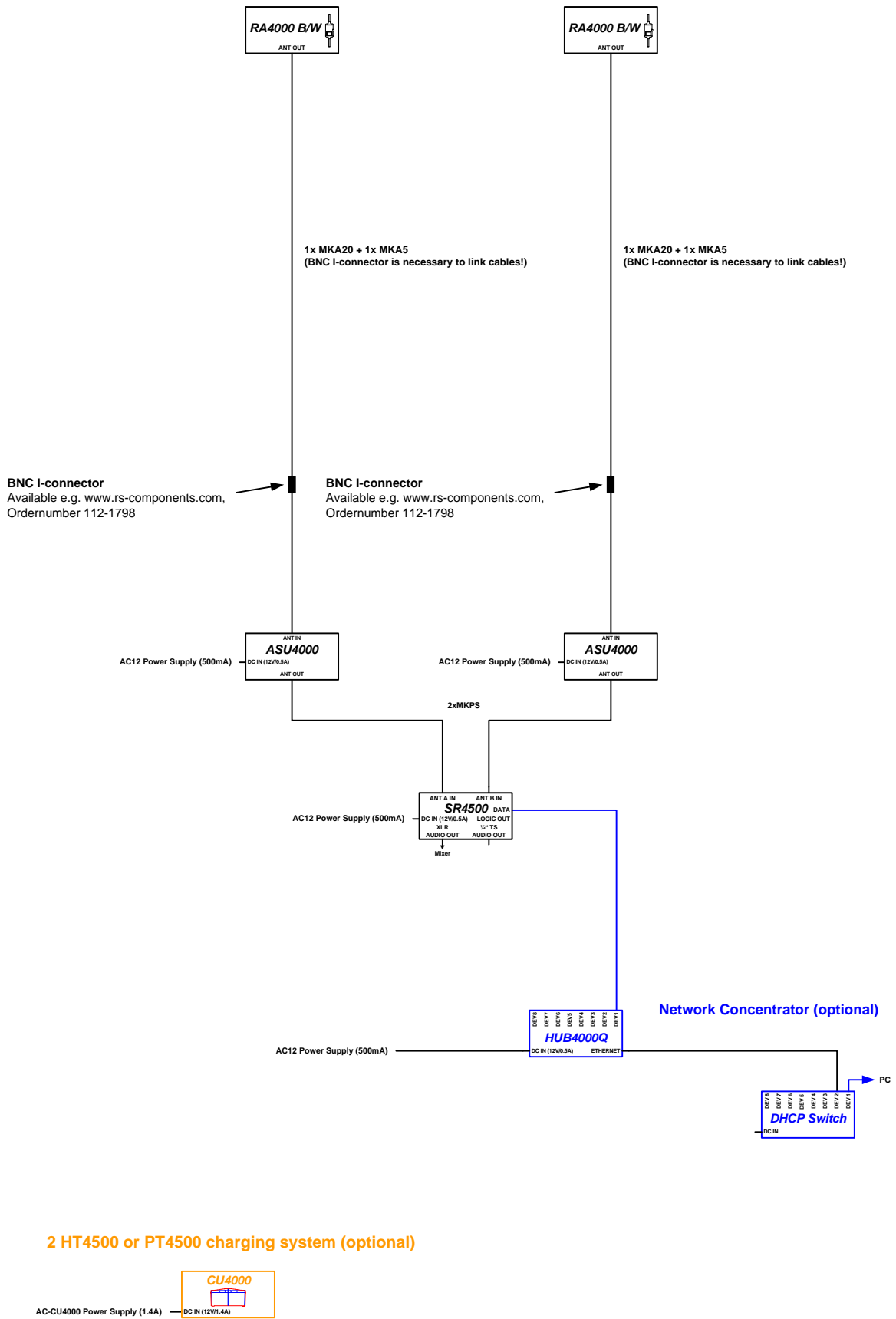
units	description	comment
1	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

1 Channel WMS4500 System with omni-directional antennas & 25m antenna cable (82 feet)



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	1 channel WMS4500 system (RA4000 B/W – Antennas)		



1 Channel WMS4500 System with omni-directional antennas, no PSU4000, no PS4000W

units	description	comment
1	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
1	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
2	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	MKA 5	16.5 ft. (5m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	ASU4000 (BNC)	Antenna Supply unit for long antenna cables (BNC connector) without AC-Adapter
3	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

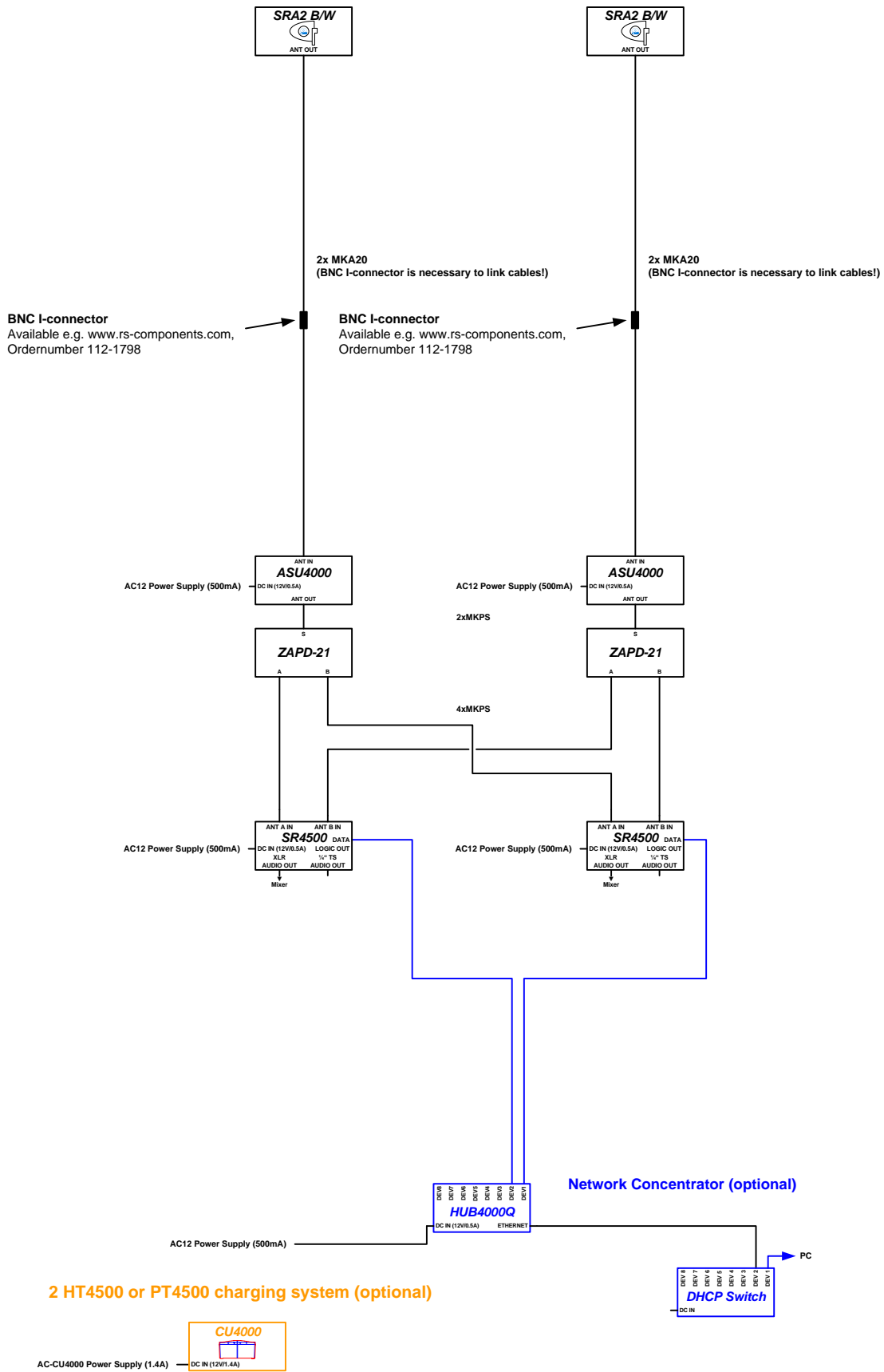
units	description	comment
1	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

2 Channel WMS4500 System With directional antennas & 40m antenna cable (132 feet)



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	2 channel WMS4500 system (SRA2 B/W – Antennas, no PS4000, PSU4000)		



2 Channel WMS4500 System with directional antennas, no PSU4000, no PS4000

units	description	comment
2	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
2	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
6	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
4	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	ASU4000 (BNC)	Antenna Supply unit for long antenna cables (BNC connector) without AC-Adapter
4	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	ZAPD21	passive power combiner (2in 1out) or Splitter (1in 2out)
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

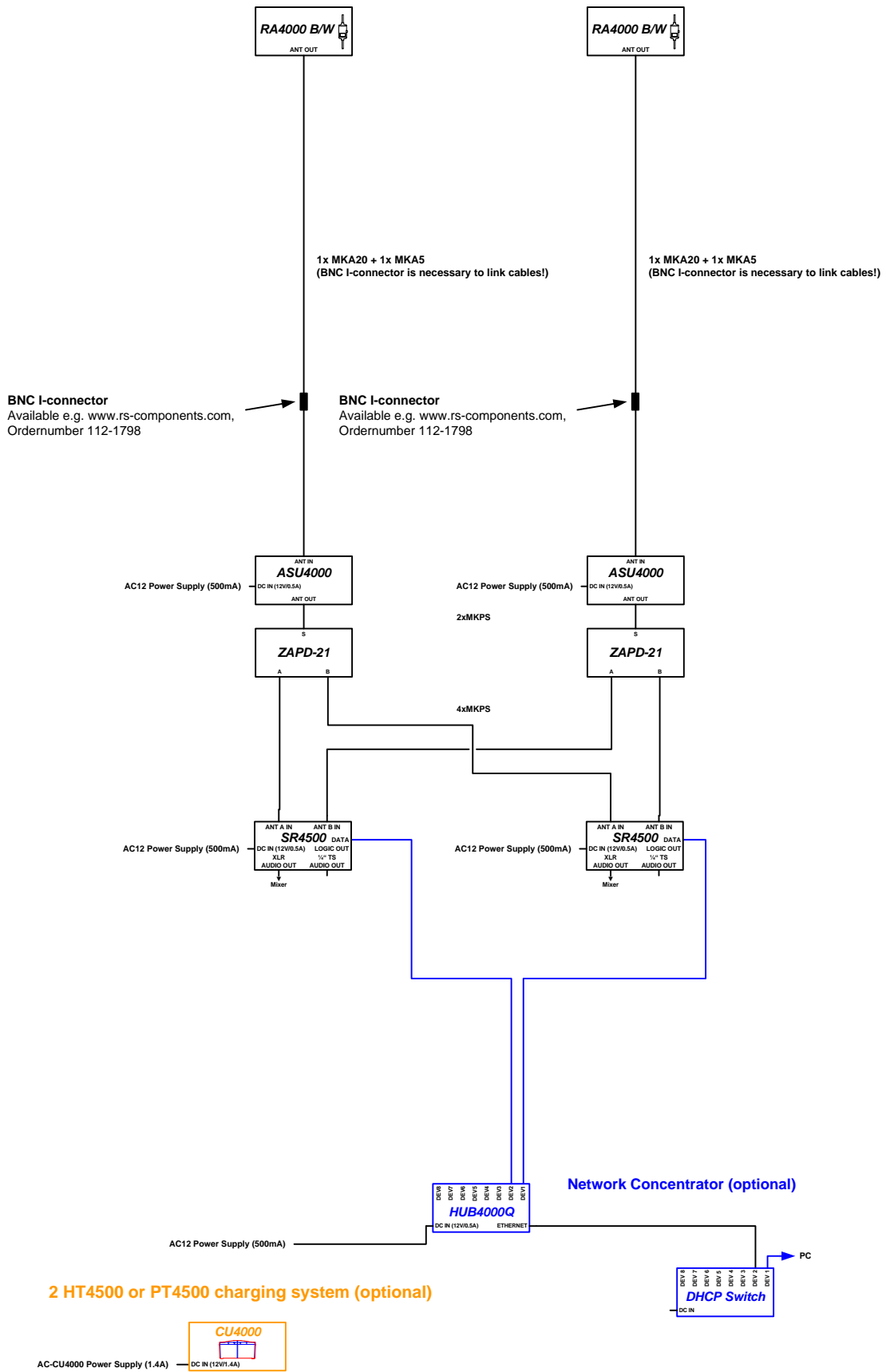
units	description	comment
1	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

2 Channel WMS4500 System with omni-directional antennas & 25m antenna cable (82 feet)



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	2 channel WMS4500 system (RA4000 B/W – Antennas, no PS4000, PSU4000)		



2 Channel WMS4500 System with omni-directional antennas, no PSU4000, no PS4000

units	description	comment
2	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
2	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
6	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	MKA 5	16.5 ft. (5m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	ASU4000 (BNC)	Antenna Supply unit for long antenna cables (BNC connector) without AC-Adapter
4	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	ZAPD21	passive power combiner (2in 1out) or Splitter (1in 2out)
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
1	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

2 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter

Rear View

Antenna A cascade output Antenna A input (DC power) Ant. B 4x Antenna A output (DC power)

Signal level adjustment

Attenuation

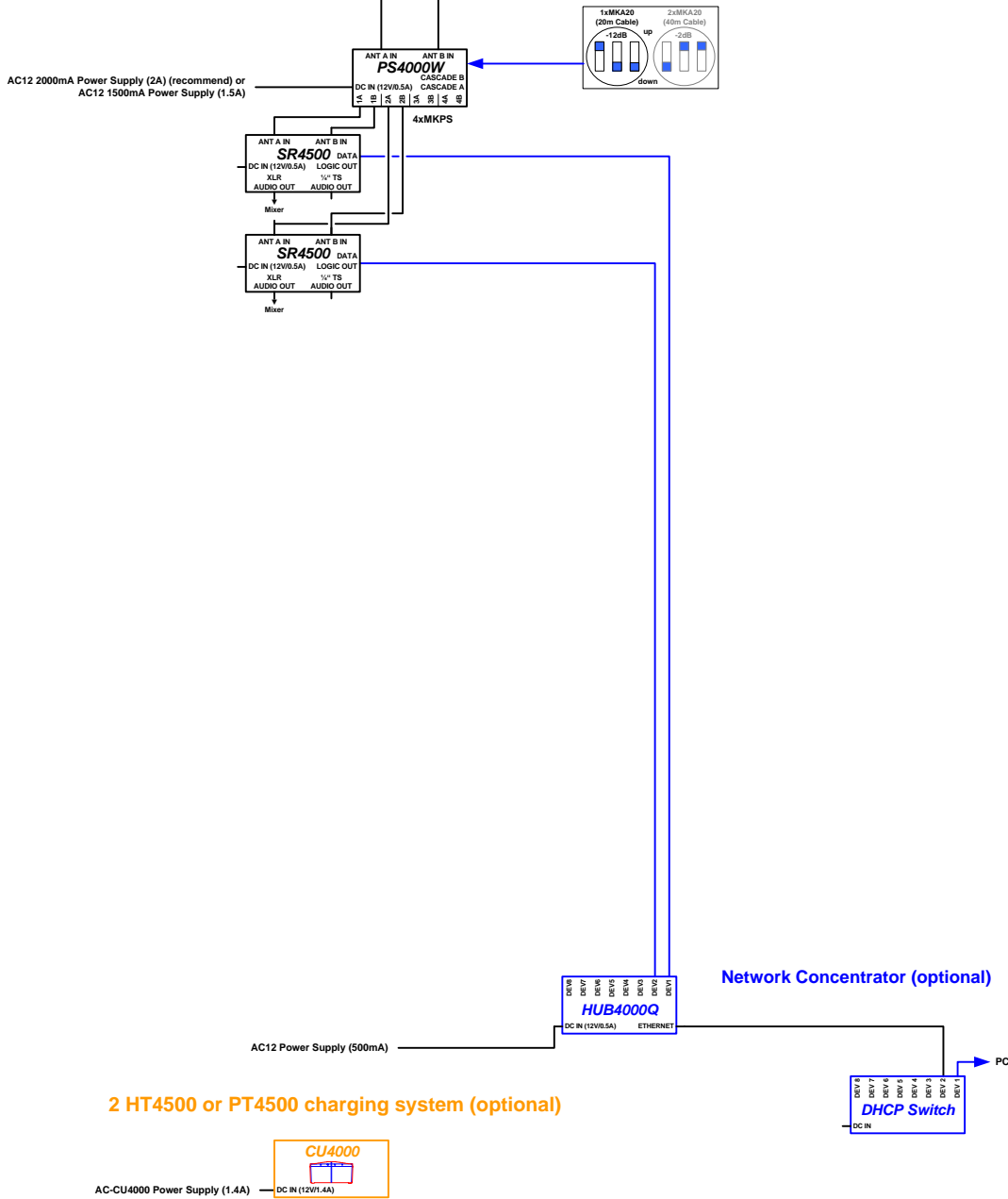
CLA

●	14 dB
●	12 dB
●	10 dB
●	8 dB
●	6 dB
●	4 dB
●	2 dB
●	0 dB

ON

1 2 3

dip switches behind AKG Logo



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	2 channel WMS4500 system (SRA2 B/W – Antennas, no PSU4000)		



2 Channel WMS4500 System with directional antennas, no PSU4000

units	description	comment
2	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
2	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
1	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
4	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
1	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

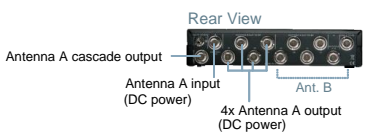
HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

2 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter



Signal level adjustment

CLA

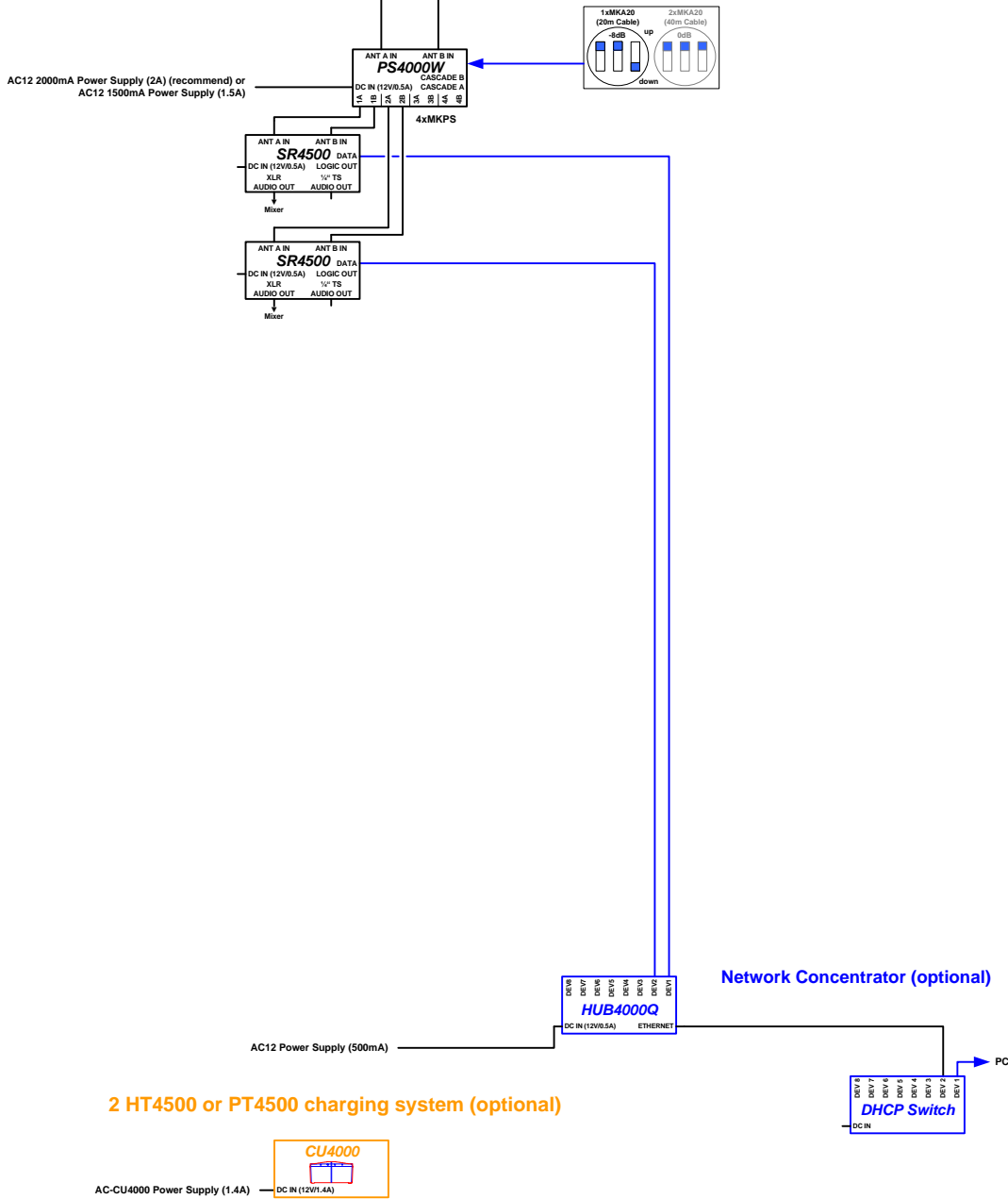
ON

1 2 3

Attenuation

- 14 dB
- 12 dB
- 10 dB
- 8 dB
- 6 dB
- 4 dB
- 2 dB
- 0 dB

dip switches behind AKG Logo



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	2 channel WMS4500 system (RA4000 B/W – Antennas, no PSU4000)		



2 Channel WMS4500 System with omni-directional antennas, no PSU4000

units	description	comment
2	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
2	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
1	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
4	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
1	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

4 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter

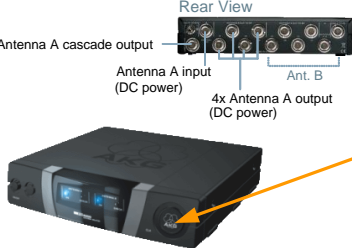
Rear View

Antenna A cascade output

Antenna A input (DC power)

Ant. B

4x Antenna A output (DC power)



Signal level adjustment

Attenuation

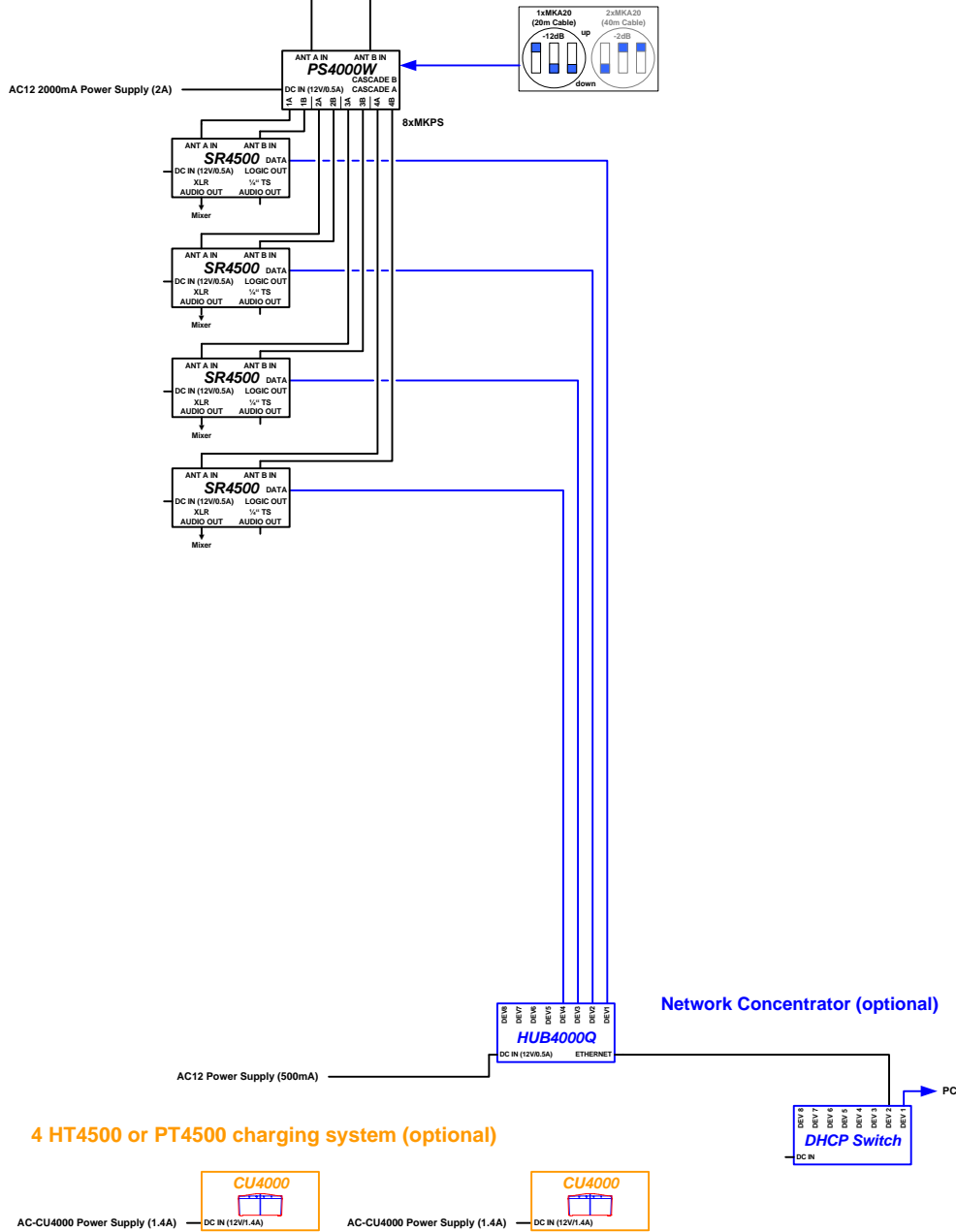
CLA

<input type="checkbox"/>	14 dB
<input type="checkbox"/>	12 dB
<input type="checkbox"/>	10 dB
<input type="checkbox"/>	8 dB
<input type="checkbox"/>	6 dB
<input type="checkbox"/>	4 dB
<input type="checkbox"/>	2 dB
<input type="checkbox"/>	0 dB

ON

1 2 3

dip switches behind AKG Logo



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	4 channel WMS4500 system (SRA2 B/W – Antennas, no PSU4000)		



4 Channel WMS4500 System with directional antennas, no PSU4000

units	description	comment
4	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
4	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
1	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
8	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
2	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

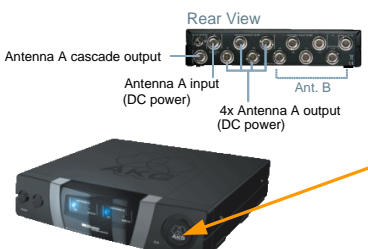
HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

4 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter



Signal level adjustment

CLA

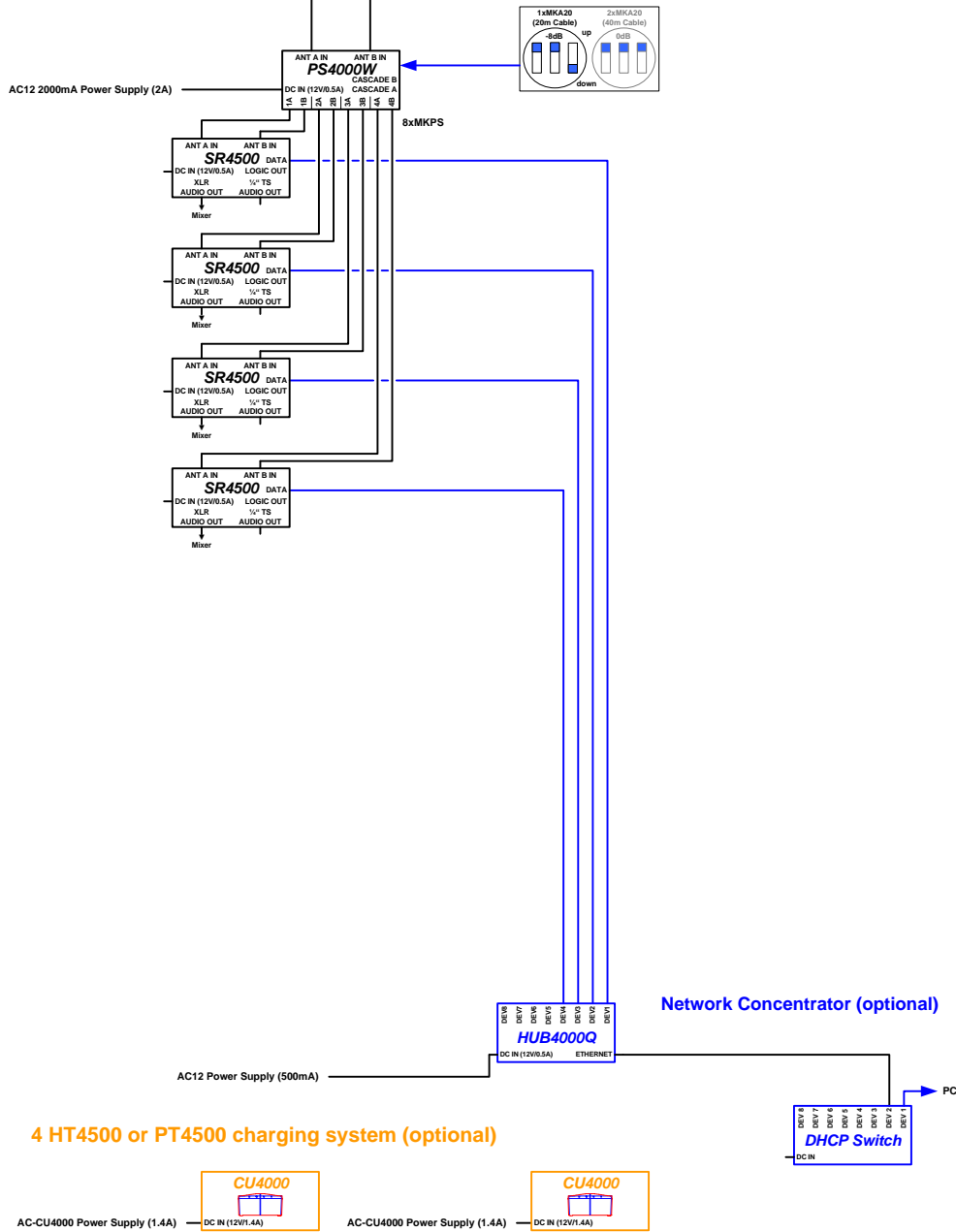
ON

1 2 3

Attenuation

- 14 dB
- 12 dB
- 10 dB
- 8 dB
- 6 dB
- 4 dB
- 2 dB
- 0 dB

dip switches behind AKG Logo



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	4 channel WMS4500 system (RA4000 B/W – Antennas, no PSU4000)		



4 Channel WMS4500 System with omni-directional antennas, no PSU4000

units	description	comment
4	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
4	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
1	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
8	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
2	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

5 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter

Signal level adjustment

Attenuation

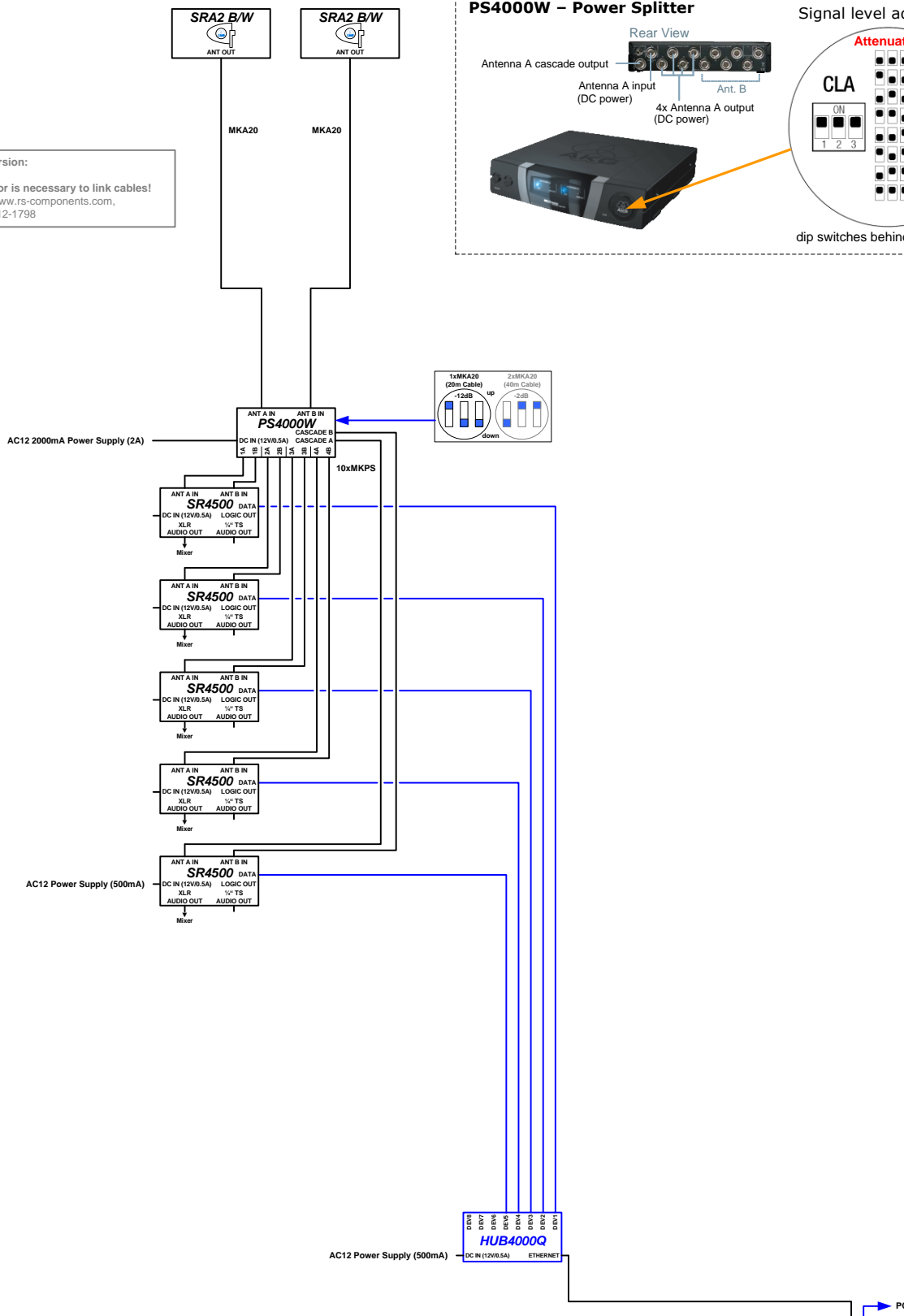
CLA

14 dB	<input type="checkbox"/>
12 dB	<input type="checkbox"/>
10 dB	<input type="checkbox"/>
8 dB	<input type="checkbox"/>
6 dB	<input type="checkbox"/>
4 dB	<input type="checkbox"/>
2 dB	<input type="checkbox"/>
0 dB	<input type="checkbox"/>

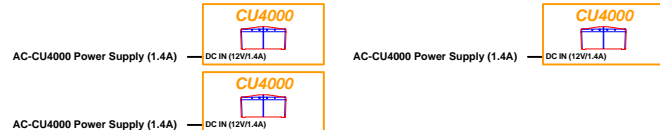
ON

1 2 3

dip switches behind AKG Logo



6 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	5 channel WMS4500 system (SRA2 B/W – Antennas)		



5 Channel WMS4500 System with directional antennas

units	description	comment
5	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
5	HT 4500 or PT4500	Hand-held transmitter or Bodaypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
1	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
10	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
3	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
3	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

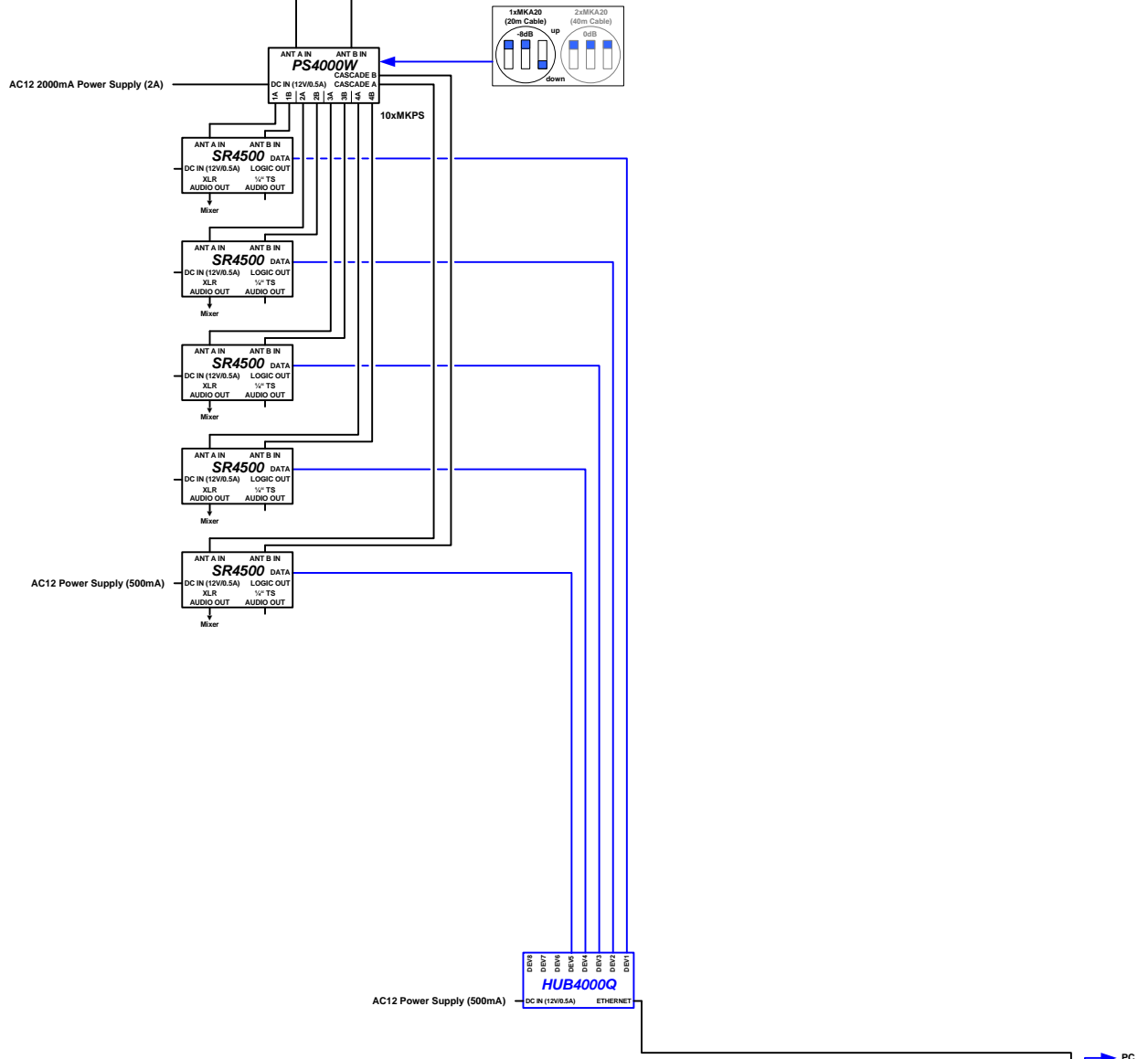
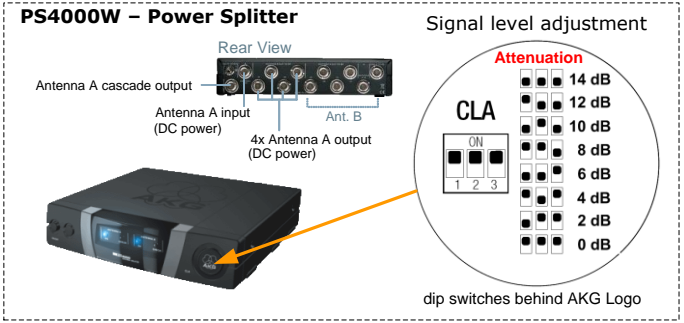
Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

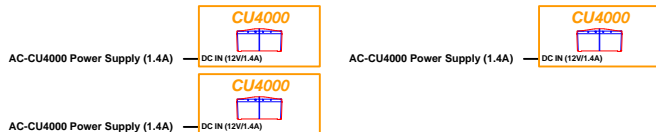
PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

5 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798



6 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	5 channel WMS4500 system (RA4000 B/W - Antennas)		



5 Channel WMS4500 System with omni-directional antennas

units	description	comment
5	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
5	HT 4500 or PT4500	Hand-held transmitter or Bodepack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
1	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
10	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
3	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
3	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

6 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter

Rear View

Antenna A cascade output

Antenna A input (DC power)

Ant. B

4x Antenna A output (DC power)

Signal level adjustment

Attenuation

CLA

ON

1 2 3

14 dB

12 dB

10 dB

8 dB

6 dB

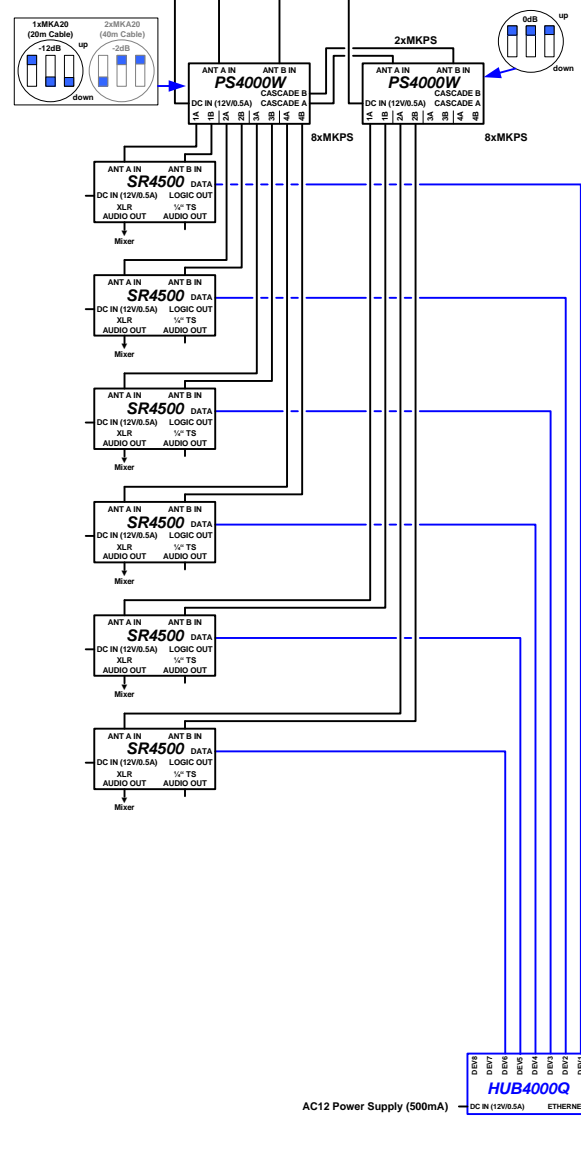
4 dB

2 dB

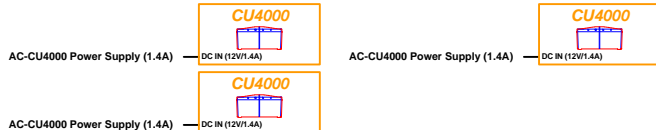
0 dB

dip switches behind AKG Logo

AC12 2000mA Power Supply (2A)
AC12 2000mA Power Supply (2A)



6 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	6 channel WMS4500 system (SRA2 B/W – Antennas)		



6 Channel WMS4500 System with directional antennas

units	description	comment
6	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
6	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
14	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000 output)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
3	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
3	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

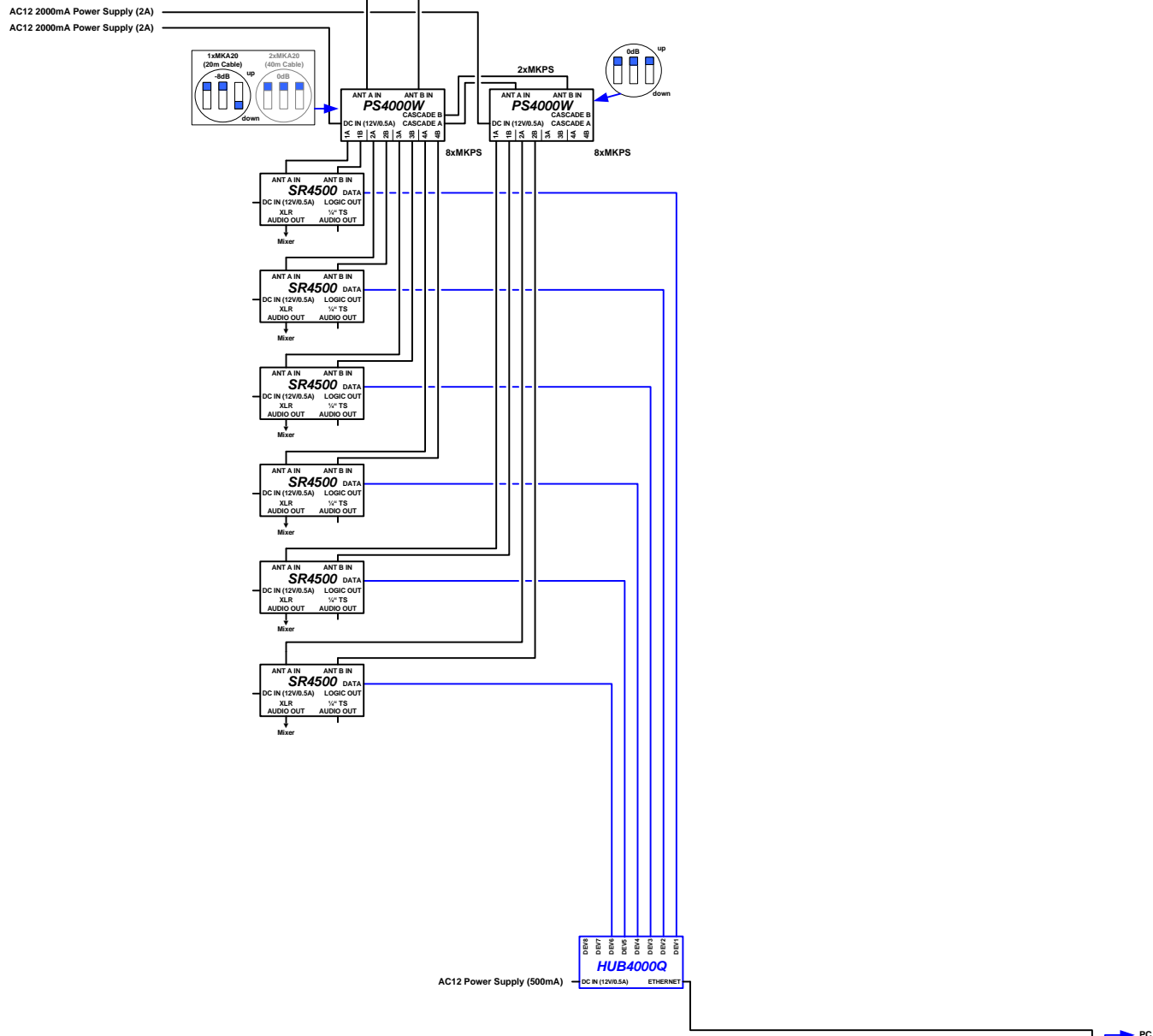
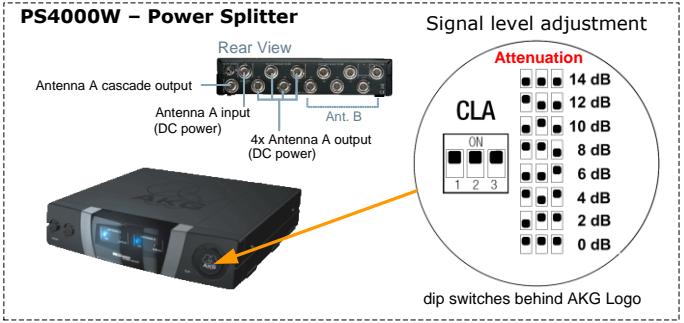
Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

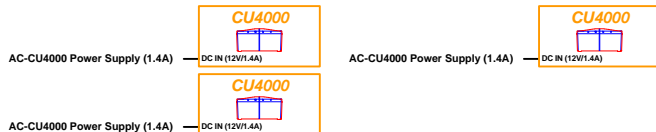
PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

6 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798



6 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	6 channel WMS4500 system (RA4000 B/W - Antennas)		



6 Channel WMS4500 System with omni-directional antennas

units	description	comment
6	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
6	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
14	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000 output)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
3	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
3	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

8 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter

Signal level adjustment

Attenuation

CLA

ON

1 2 3

14 dB

12 dB

10 dB

8 dB

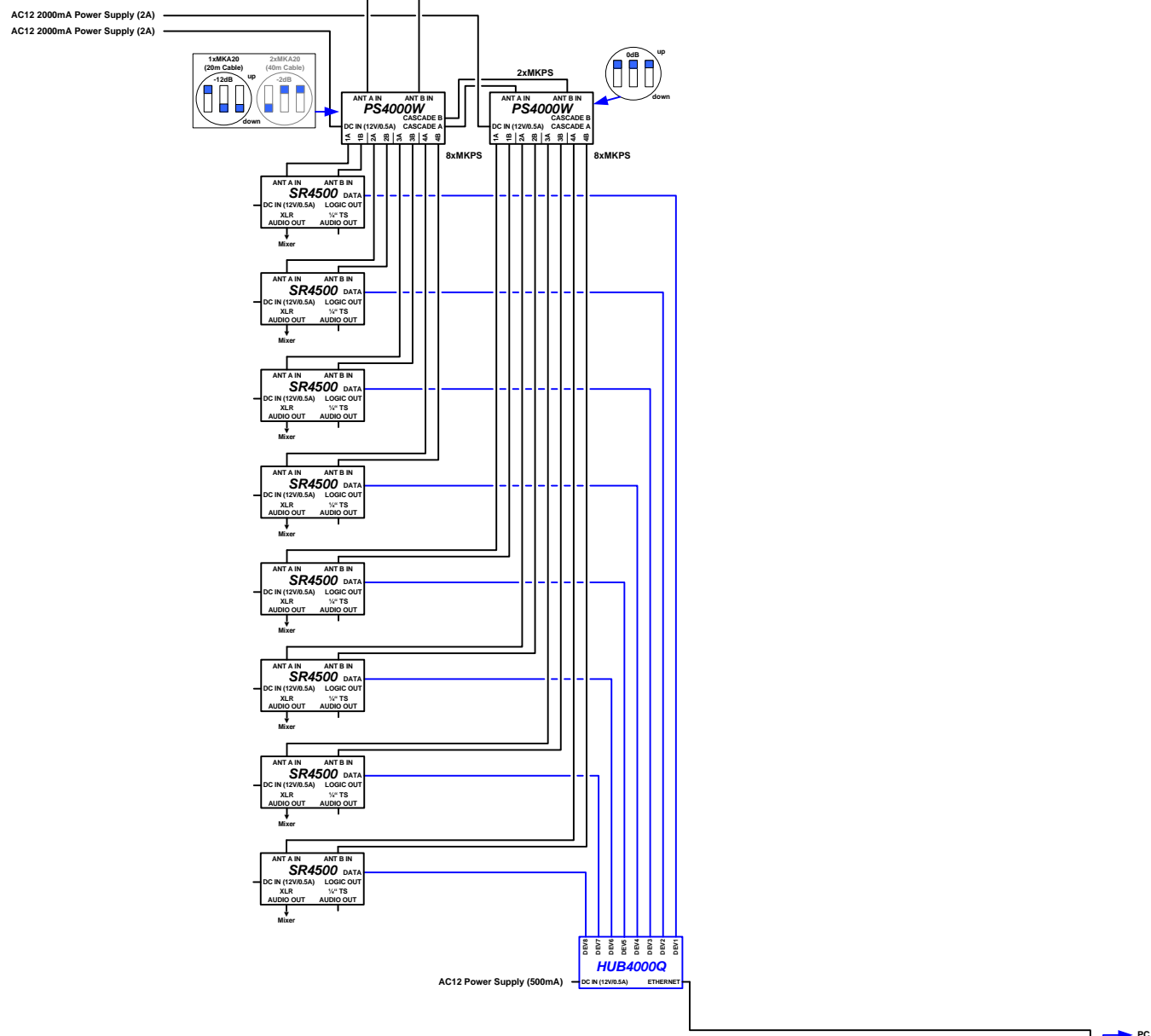
6 dB

4 dB

2 dB

0 dB

dip switches behind AKG Logo



8 HT4500 or PT4500 charging system (optional)

<p>AC-CU4000 Power Supply (1.4A) — DC IN (12V/1.4A)</p>	<p>AC-CU4000 Power Supply (1.4A) — DC IN (12V/1.4A)</p>
<p>AC-CU4000 Power Supply (1.4A) — DC IN (12V/1.4A)</p>	<p>AC-CU4000 Power Supply (1.4A) — DC IN (12V/1.4A)</p>

HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	8 channel WMS4500 system (SRA2 B/W – Antennas)		

8 Channel WMS4500 System with directional antennas

units	description	comment
8	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
8	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
18	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000 output)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
4	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
4	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

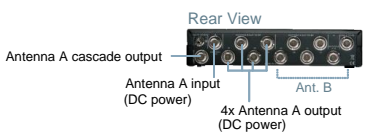
HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

8 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter



Signal level adjustment

Attenuation

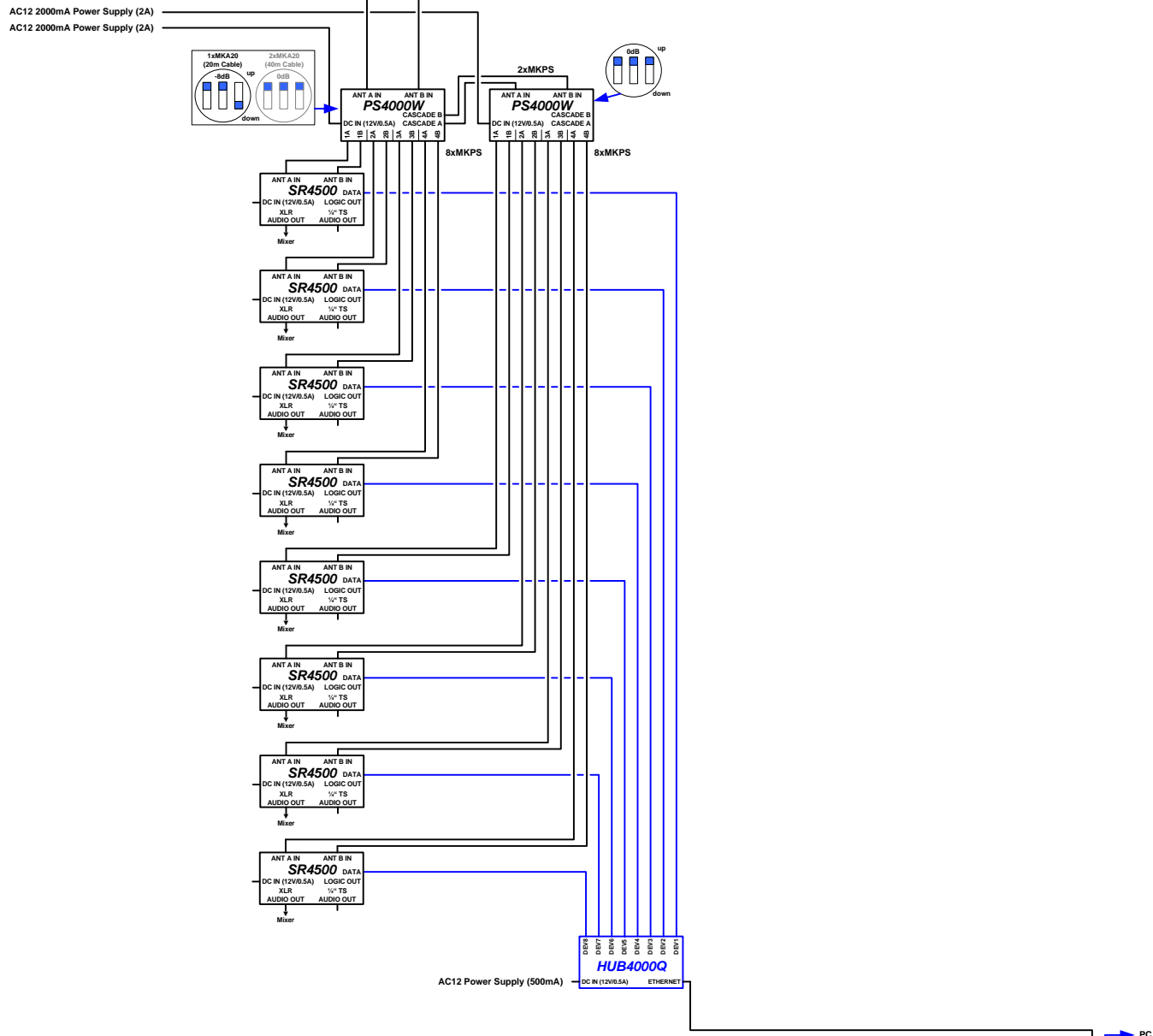
CLA

14 dB	●
12 dB	●
10 dB	●
8 dB	●
6 dB	●
4 dB	●
2 dB	●
0 dB	●

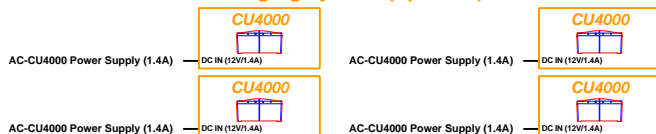
ON

1 2 3

dip switches behind AKG Logo



8 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	8 channel WMS4500 system (RA4000 B/W – Antennas)		



8 Channel WMS4500 System with omni-directional antennas

units	description	comment
8	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
8	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
18	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000 output)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
4	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
4	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
1	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

9 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter

Signal level adjustment

Attenuation

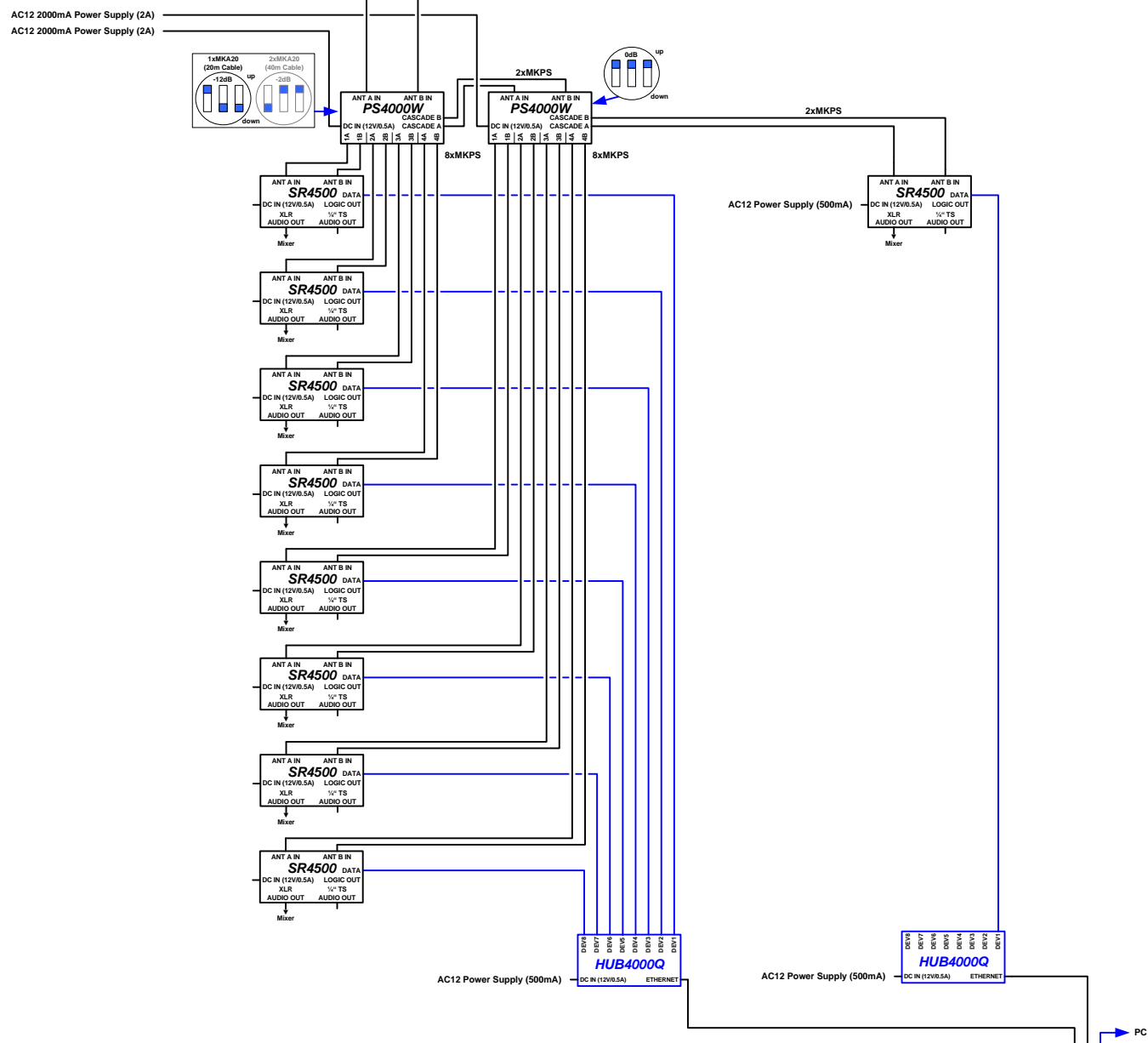
CLA

14 dB	<input type="checkbox"/>
12 dB	<input type="checkbox"/>
10 dB	<input type="checkbox"/>
8 dB	<input type="checkbox"/>
6 dB	<input type="checkbox"/>
4 dB	<input type="checkbox"/>
2 dB	<input type="checkbox"/>
0 dB	<input type="checkbox"/>

ON

1 2 3

dip switches behind AKG Logo



10 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	9 channel WMS4500 system (SRA2 B/W – Antennas)		



9 Channel WMS4500 System with directional antennas

units	description	comment
9	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
9	HT 4500 or PT4500	Hand-held transmitter or Bodaypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
20	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
5	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
5	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

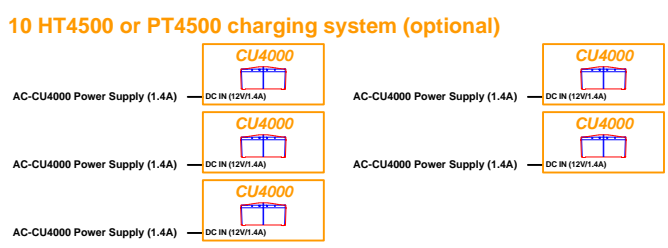
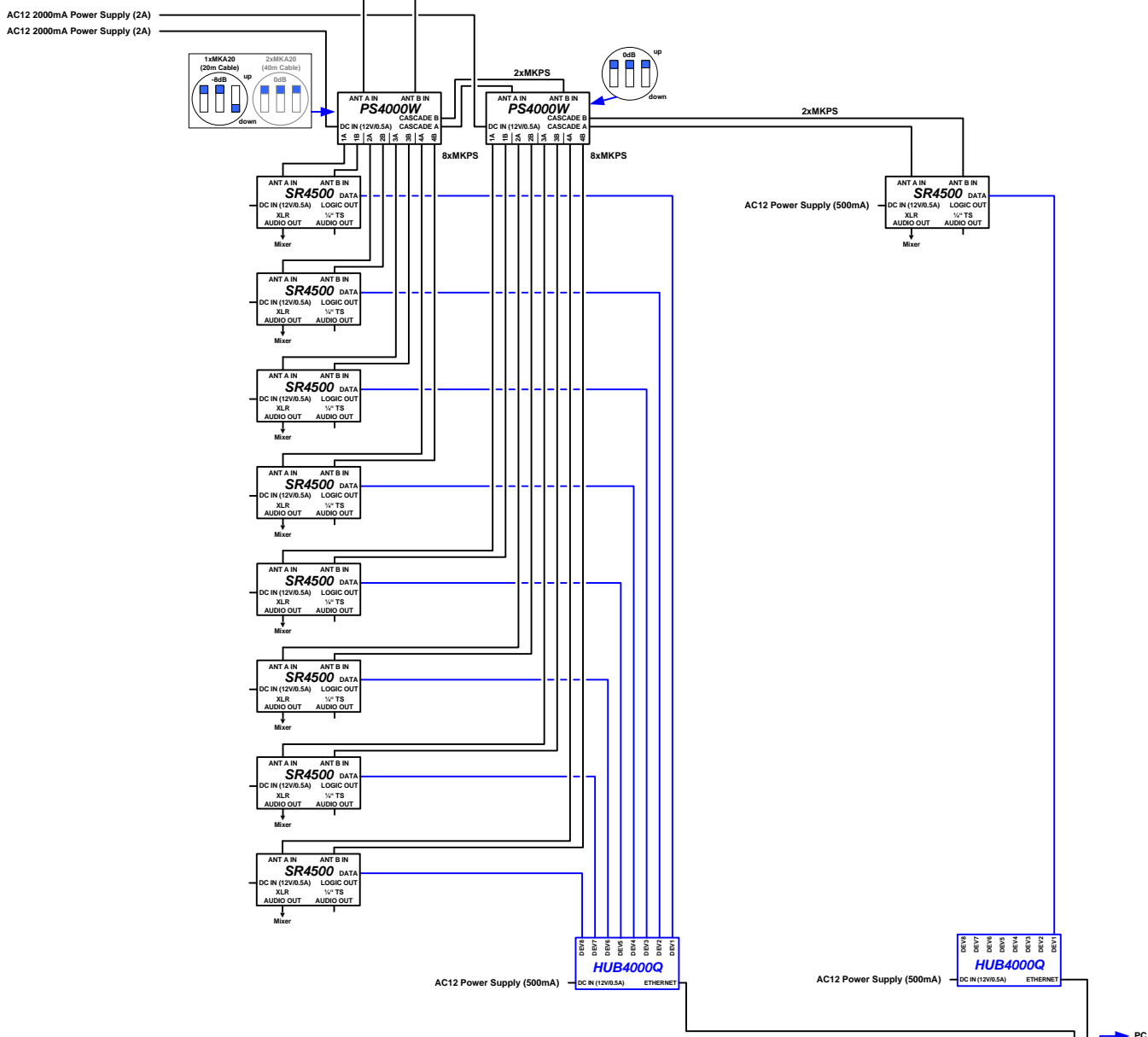
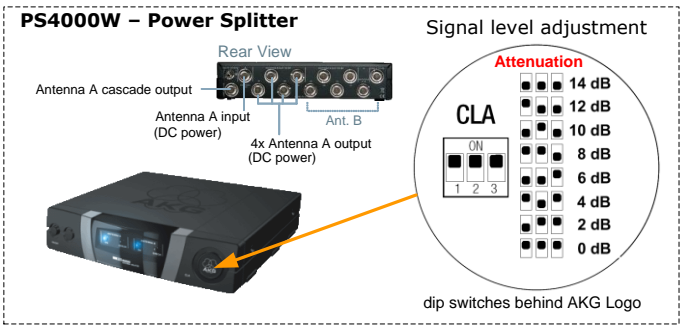
Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

9 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	9 channel WMS4500 system (RA4000 B/W - Antennas)		



9 Channel WMS4500 System with omni-directional antennas

units	description	comment
9	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
9	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
2	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
20	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	AC12 2000mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS4000 W (you can also use a PSU4000 output)
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
5	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
5	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

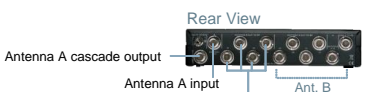
HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

10 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter



Signal level adjustment

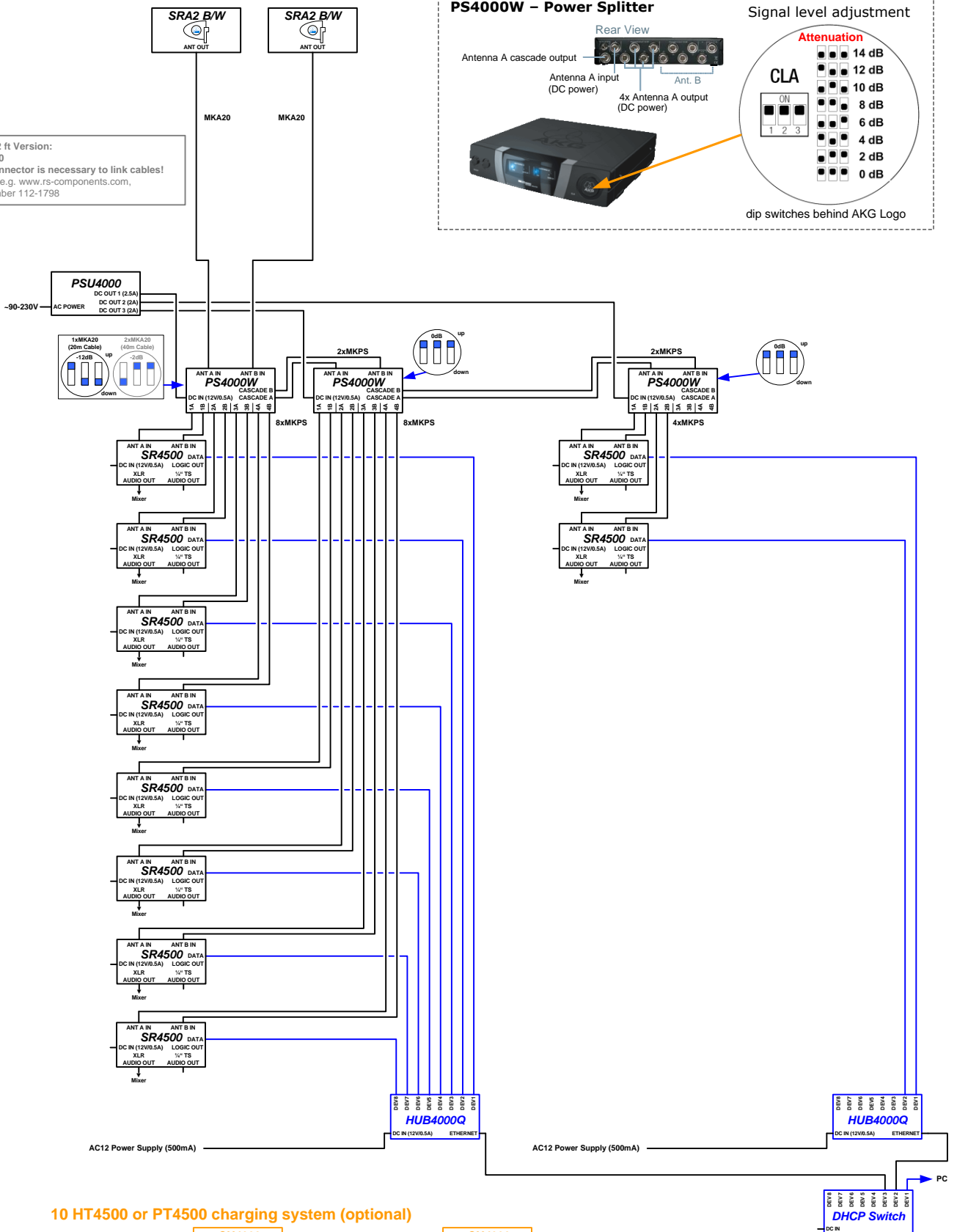
Attenuation

CLA

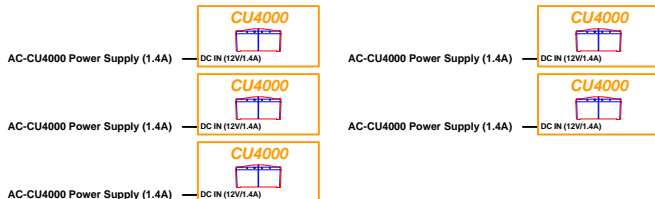
ON

14 dB	<input type="checkbox"/>
12 dB	<input type="checkbox"/>
10 dB	<input type="checkbox"/>
8 dB	<input type="checkbox"/>
6 dB	<input type="checkbox"/>
4 dB	<input type="checkbox"/>
2 dB	<input type="checkbox"/>
0 dB	<input type="checkbox"/>

dip switches behind AKG Logo



10 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	10 channel WMS4500 system (SRA2 B/W – Antennas)		



10 Channel WMS4500 System with directional antennas

units	description	comment
10	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
10	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
3	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
24	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
5	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
5	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

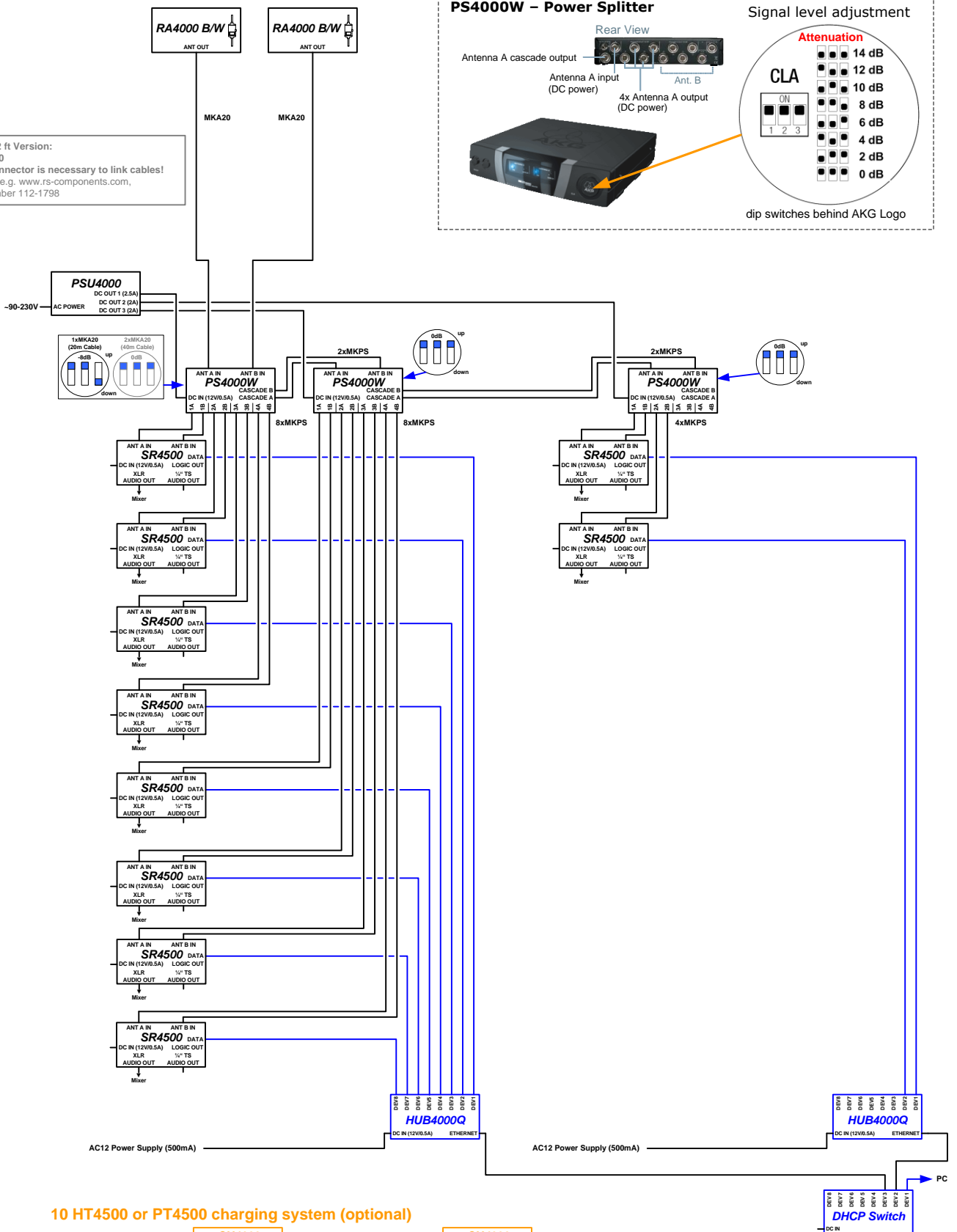
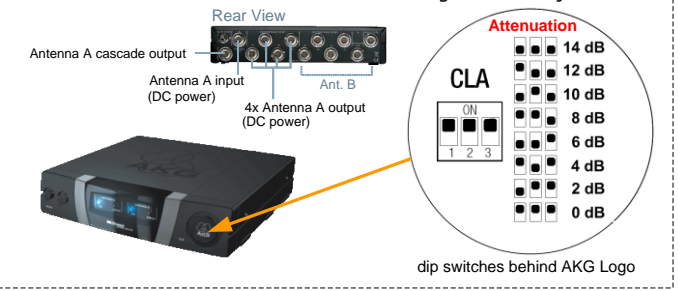
HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

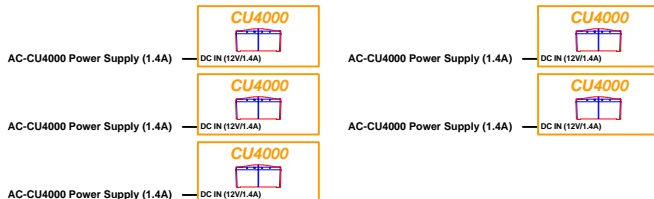
10 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter



10 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	10 channel WMS4500 system (RA4000 B/W – Antennas)		



10 Channel WMS4500 System with omni-directional antennas

units	description	comment
10	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
10	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
3	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
24	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
5	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
5	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

12 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter

Signal level adjustment

CLA

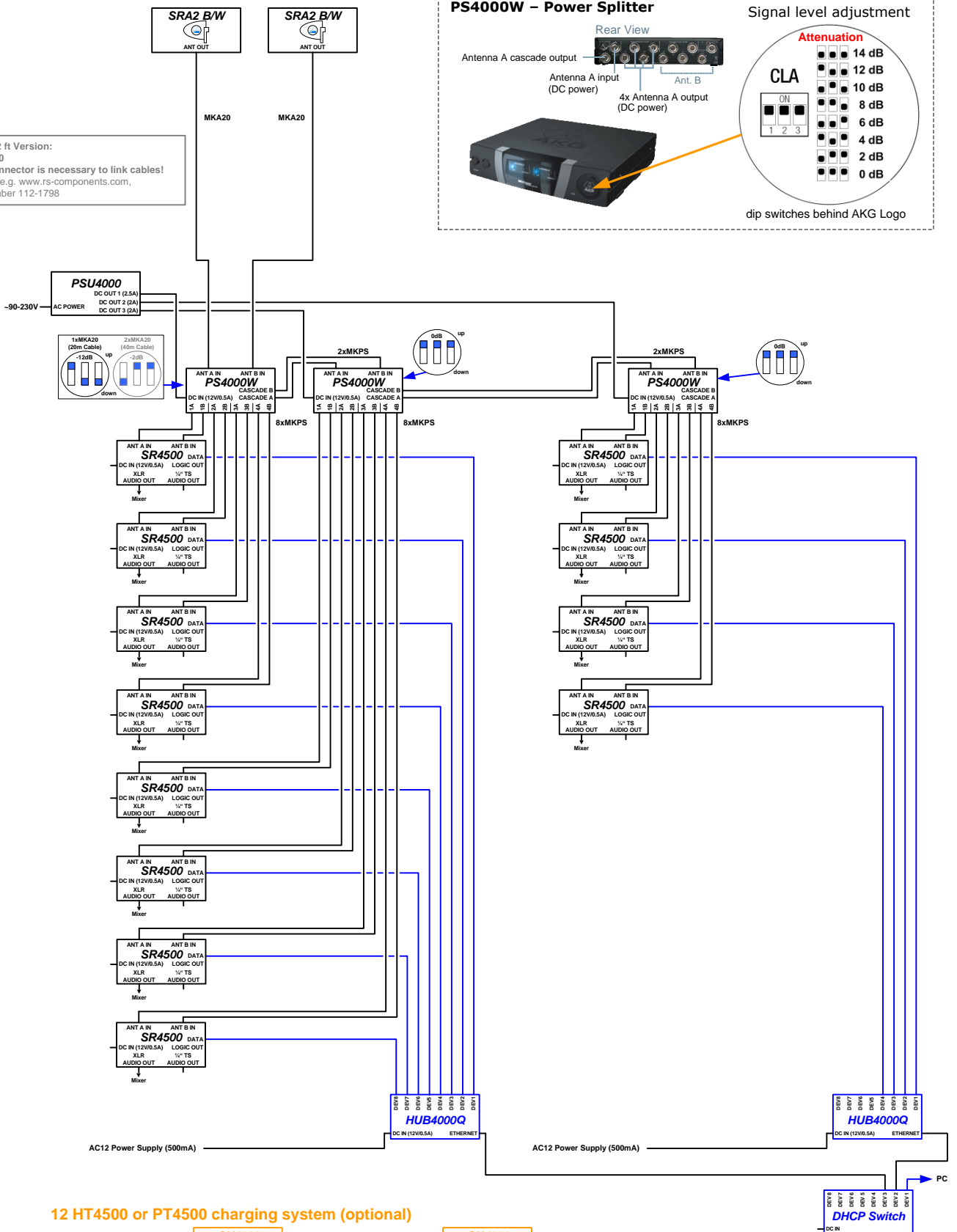
ON

1 2 3

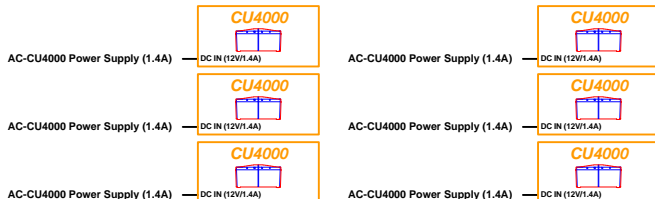
Attenuation

- 14 dB
- 12 dB
- 10 dB
- 8 dB
- 6 dB
- 4 dB
- 2 dB
- 0 dB

dip switches behind AKG Logo



12 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	12 channel WMS4500 system (SRA2 B/W – Antennas)		



12 Channel WMS4500 System with directional antennas

units	description	comment
12	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
12	HT 4500 or PT4500	Hand-held transmitter or Bodaypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
3	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
28	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
6	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
6	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

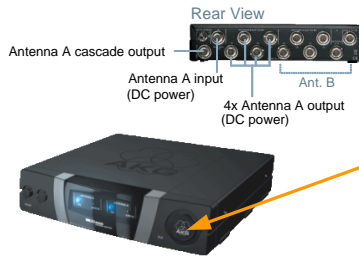
HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

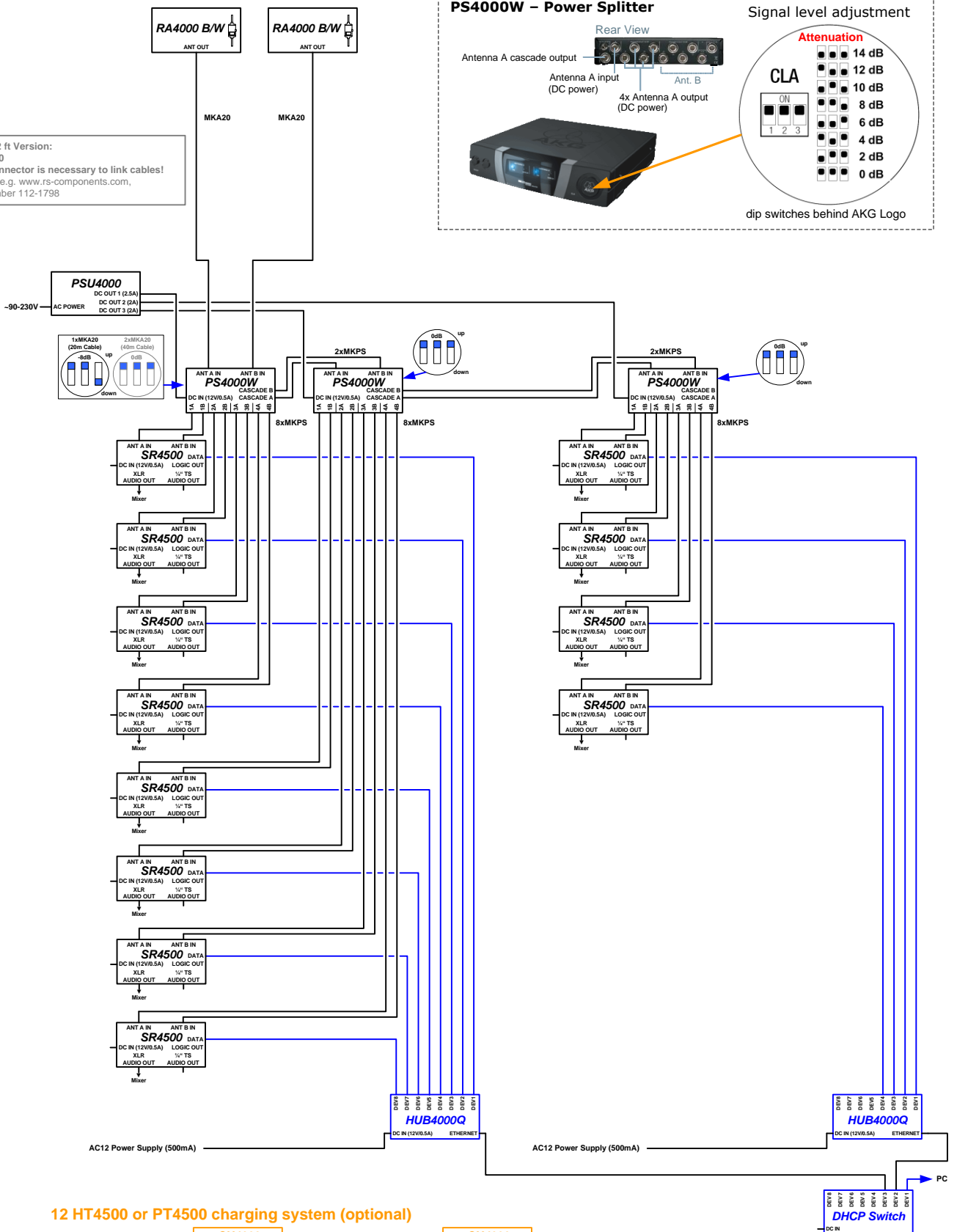
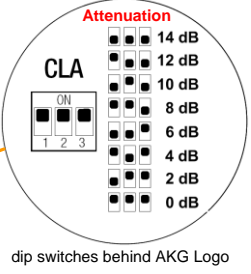
12 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

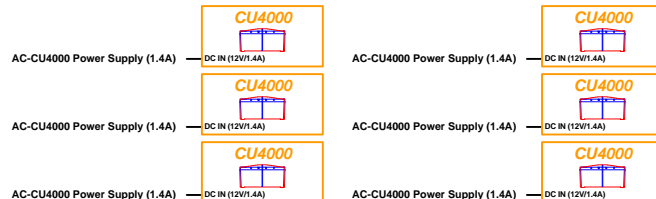
PS4000W – Power Splitter



Signal level adjustment



12 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	12 channel WMS4500 system (RA4000 B/W – Antennas)		



12 Channel WMS4500 System with omni-directional antennas

units	description	comment
12	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
12	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
3	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
28	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
1	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
6	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
6	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.
2	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

16 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798

PS4000W – Power Splitter

Rear View

Antenna A cascade output Ant. B
Antenna A input (DC power) 4x Antenna A output (DC power)

Signal level adjustment

Attenuation

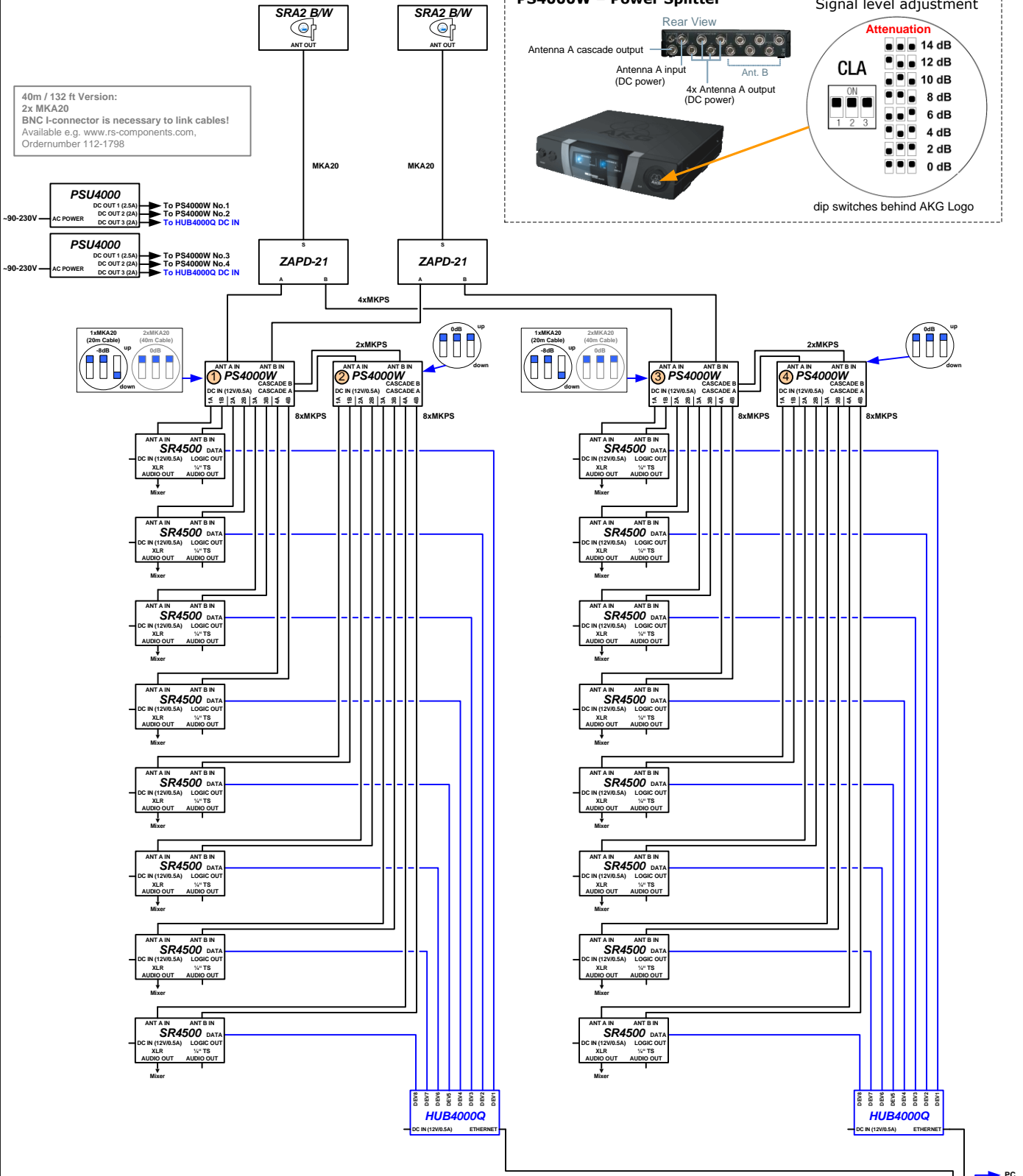
14 dB
12 dB
10 dB
8 dB
6 dB
4 dB
2 dB
0 dB

CLA

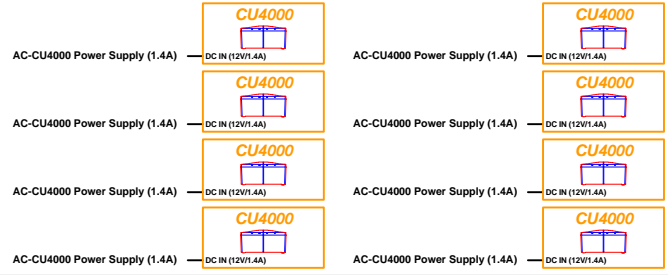
ON

1 2 3

dip switches behind AKG Logo



16 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	16 channel WMS4500 system (SRA2 B/W – Antennas)		



16 Channel WMS4500 System with directional antennas

units	description	comment
16	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
16	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
4	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
40	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable
2	ZAPD21	passive power combiner (2in 1out) or Splitter (1in 2out)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

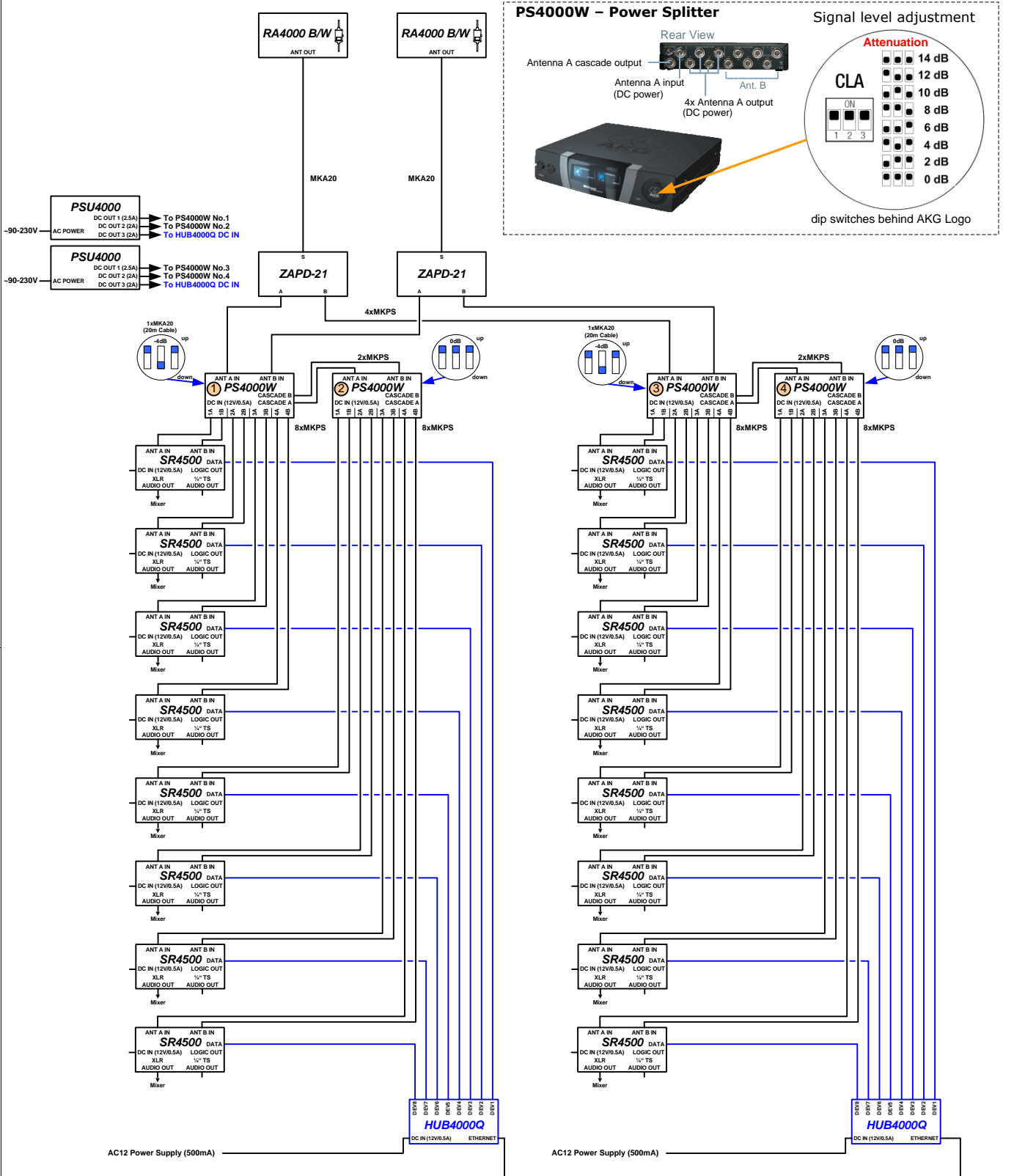
units	description	comment
8	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
8	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

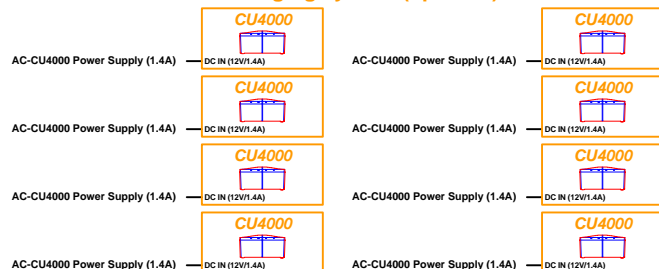
HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

16 Channel WMS4500 System with omni-directional antennas & 20m antenna cable (66 feet)



16 HT4500 or PT4500 charging system (optional)



HUB4000Q - Network Concentrator (optional)

Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	16 channel WMS4500 system (RA4000 B/W – Antennas)		



16 Channel WMS4500 System with omni-directional antennas

units	description	comment
16	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
16	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
4	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
40	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable
2	ZAPD21	passive power combiner (2in 1out) or Splitter (1in 2out)

Optional Components

units	description	comment
8	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
8	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	AC12 500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)
2	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

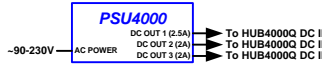
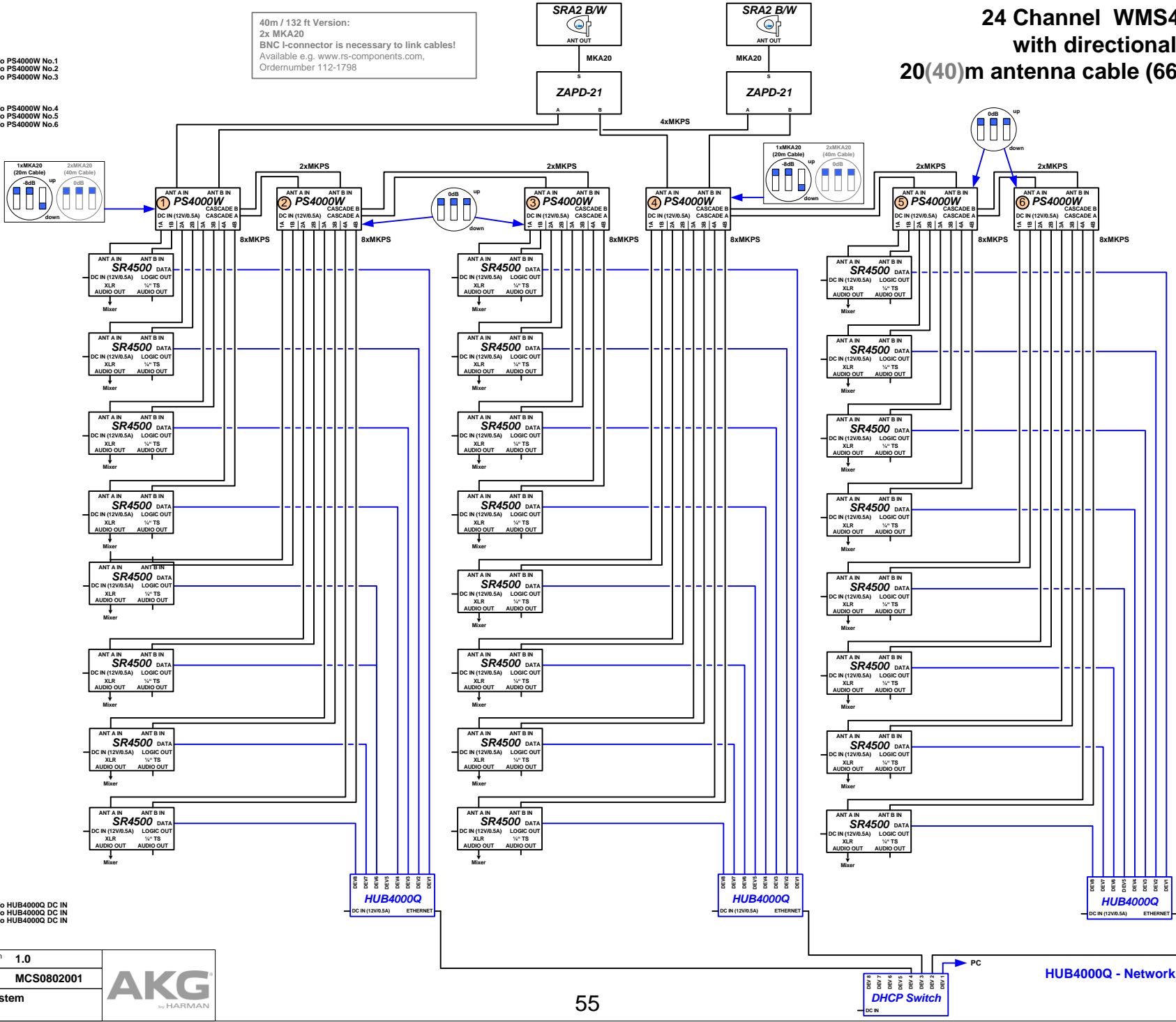
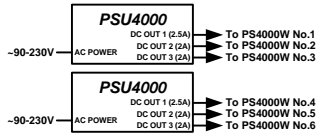
Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

24 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

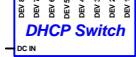
40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798



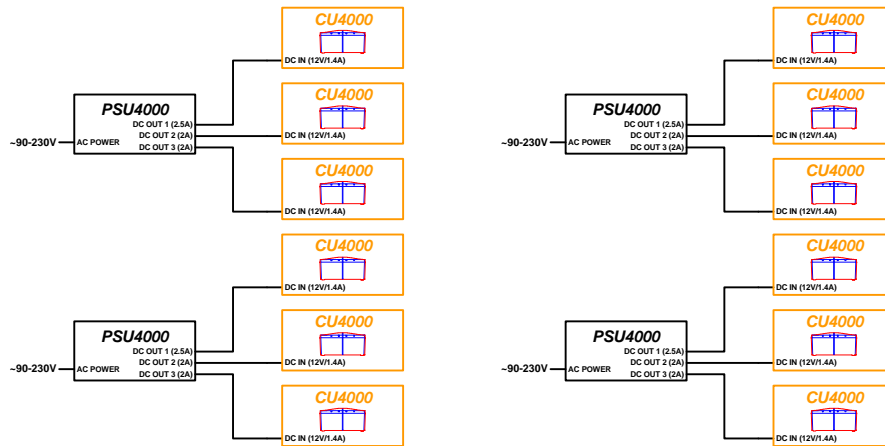
Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	24 channel WMS4500 system (SRA2 B/W – Antennas)		



HUB4000Q - Network Concentrator (optional)

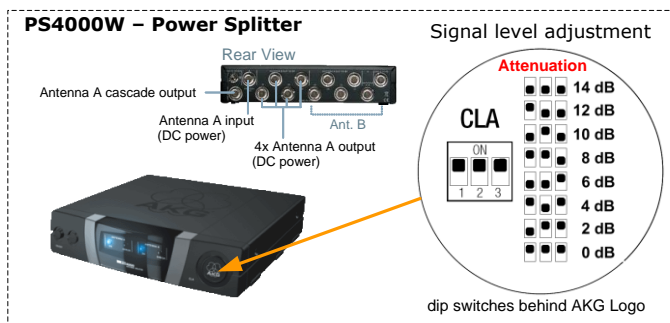


24 Channel WMS4500 Charging System



If you don't want to use PSU4000 for optional components, you can also use 12x AC-CU4000 Power Supply for CU4000's and 3x AC12 Power Supply for the HUB4000Q's

PS4000W Technical Information



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	24 channel WMS4500 charging system		



24 Channel WMS4500 System with directional antennas

units	description	comment
24	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
24	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
6	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
60	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable
2	ZAPD21	passive power combiner (2in 1out) or Splitter (1in 2out)

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

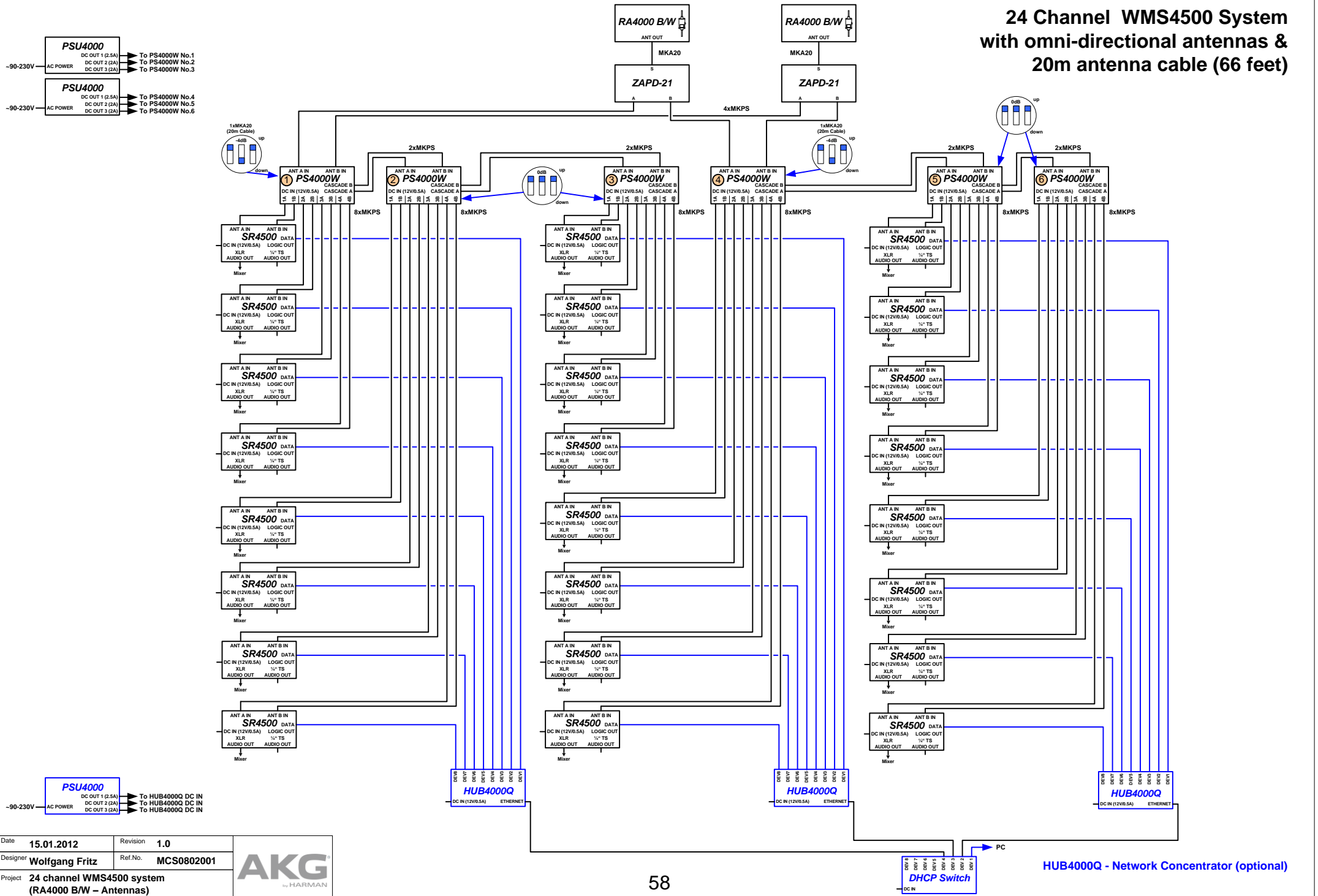
units	description	comment
12	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
5	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable
3	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

24 Channel WMS4500 System with omni-directional antennas & 20m antenna cable (66 feet)

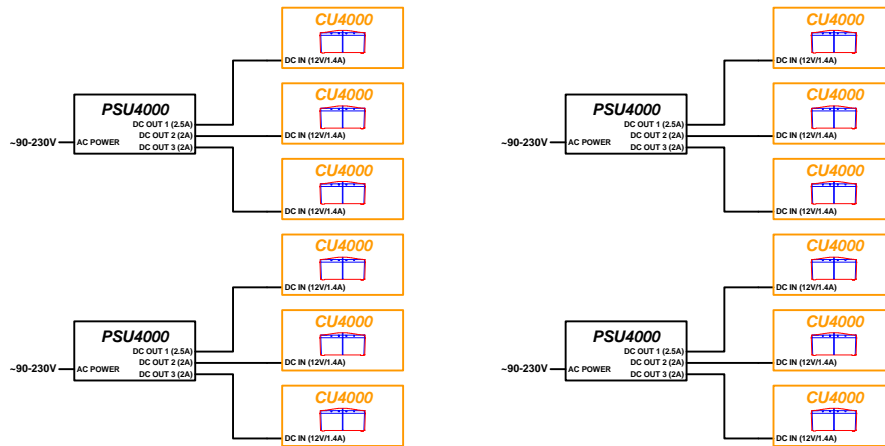


Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	24 channel WMS4500 system (RA4000 B/W – Antennas)		



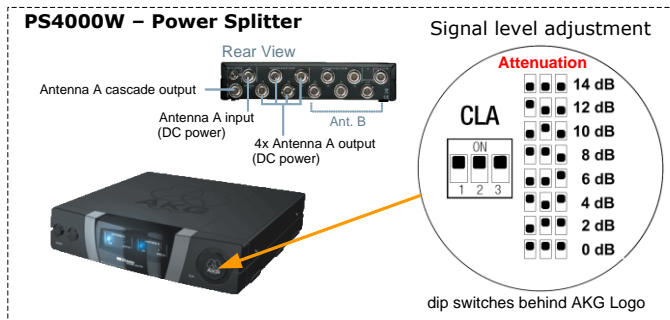
HUB4000Q - Network Concentrator (optional)

24 Channel WMS4500 Charging System



If you don't want to use PSU4000 for optional components, you can also use 12x AC-CU4000 Power Supply for CU4000's and 3x AC12 Power Supply for the HUB4000Q's

PS4000W Technical Information



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	24 channel WMS4500 charging system		



24 Channel WMS4500 System with omni-directional antennas

units	description	comment
24	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
24	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
6	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)
60	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable
2	ZAPD21	passive power combiner (2in 1out) or Splitter (1in 2out)

Optional Components

units	description	comment
12	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
5	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable
3	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

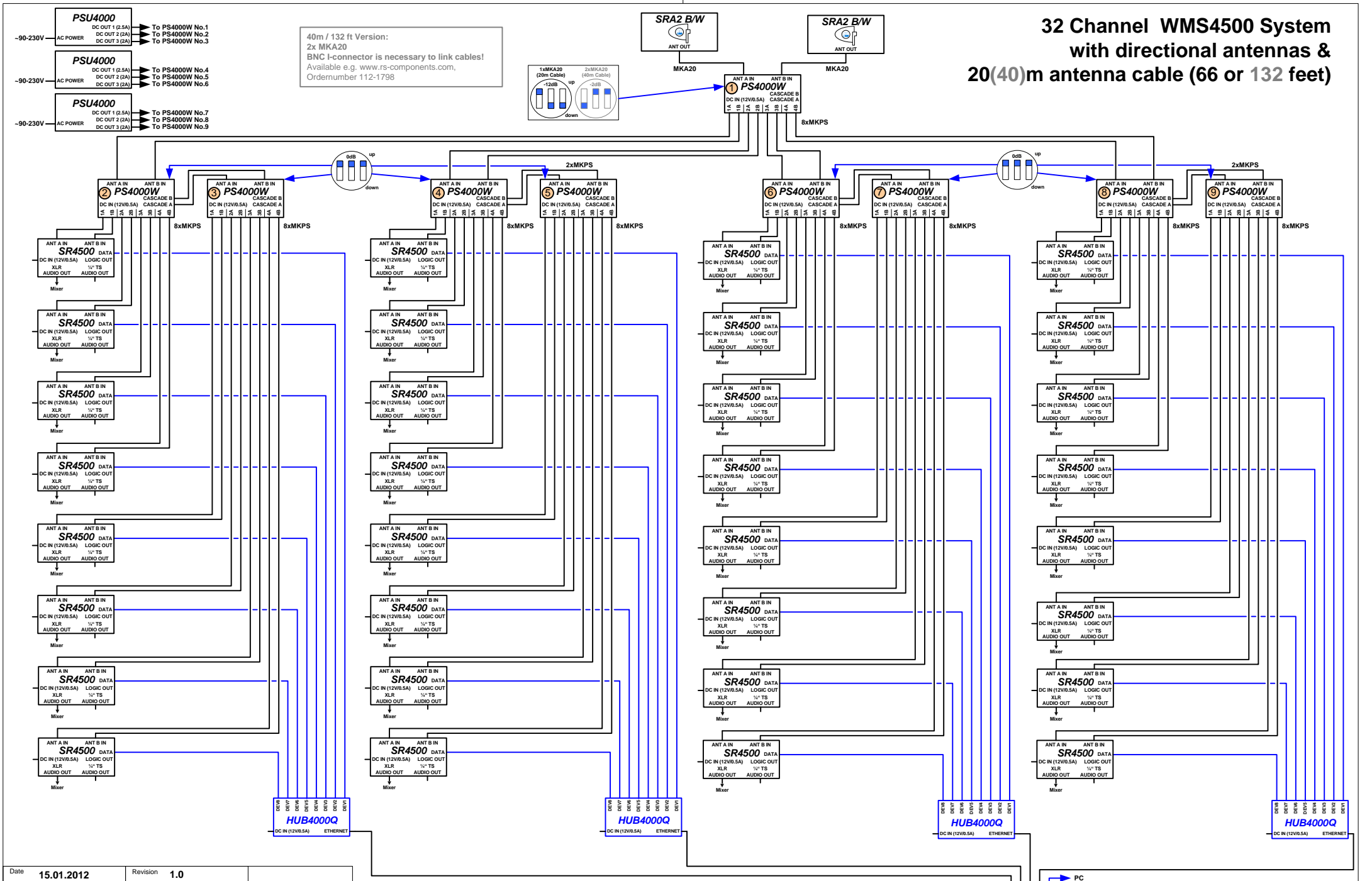
Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

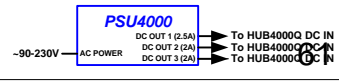
PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L

32 Channel WMS4500 System with directional antennas & 20(40)m antenna cable (66 or 132 feet)

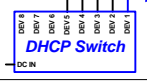
40m / 132 ft Version:
2x MKA20
BNC I-connector is necessary to link cables!
Available e.g. www.rs-components.com,
Ordernumber 112-1798



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	32 channel WMS4500 system (SRA2 B/W – Antennas)		

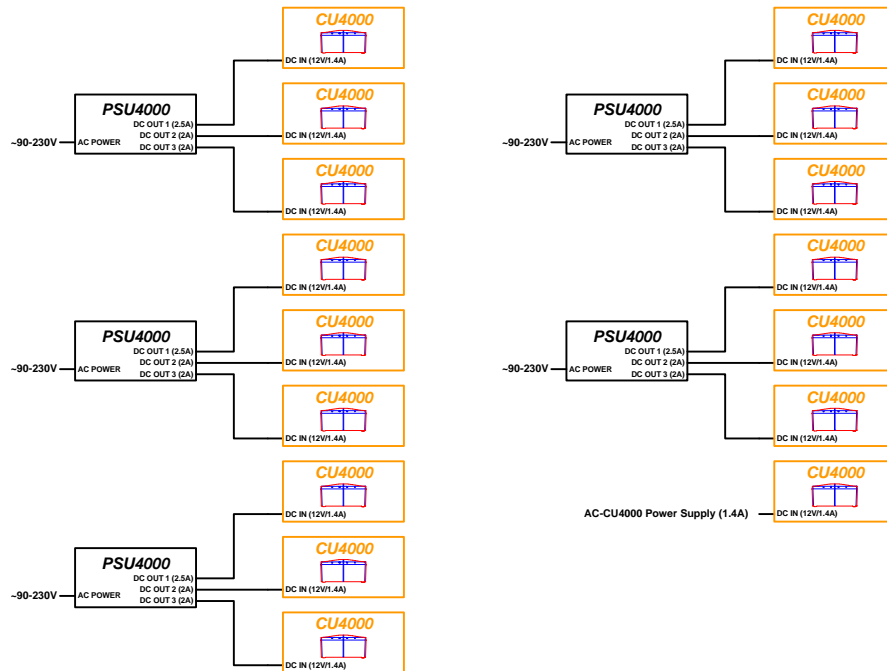


AC12 Power Supply (500mA) → To HUB4000Q DC IN



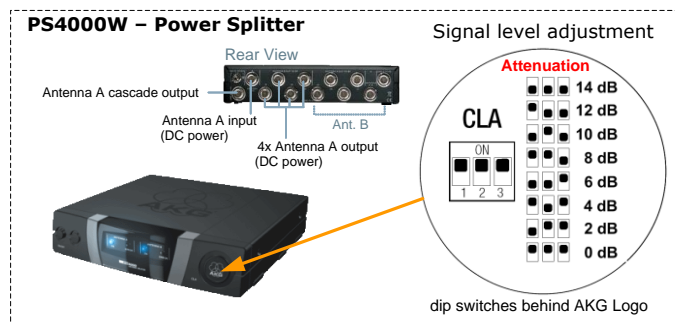
HUB4000Q - Network Concentrator (optional)

32 Channel WMS4500 Charging System



If you don't want to use PSU4000 for optional components, you can also use 16x AC-CU4000 Power Supply for CU4000's and 8x AC12 Power Supply for the HUB4000Q's and HPA4000's

PS4000W Technical Information



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	32 channel WMS4500 charging system		



32 Channel WMS4500 System with directional antennas

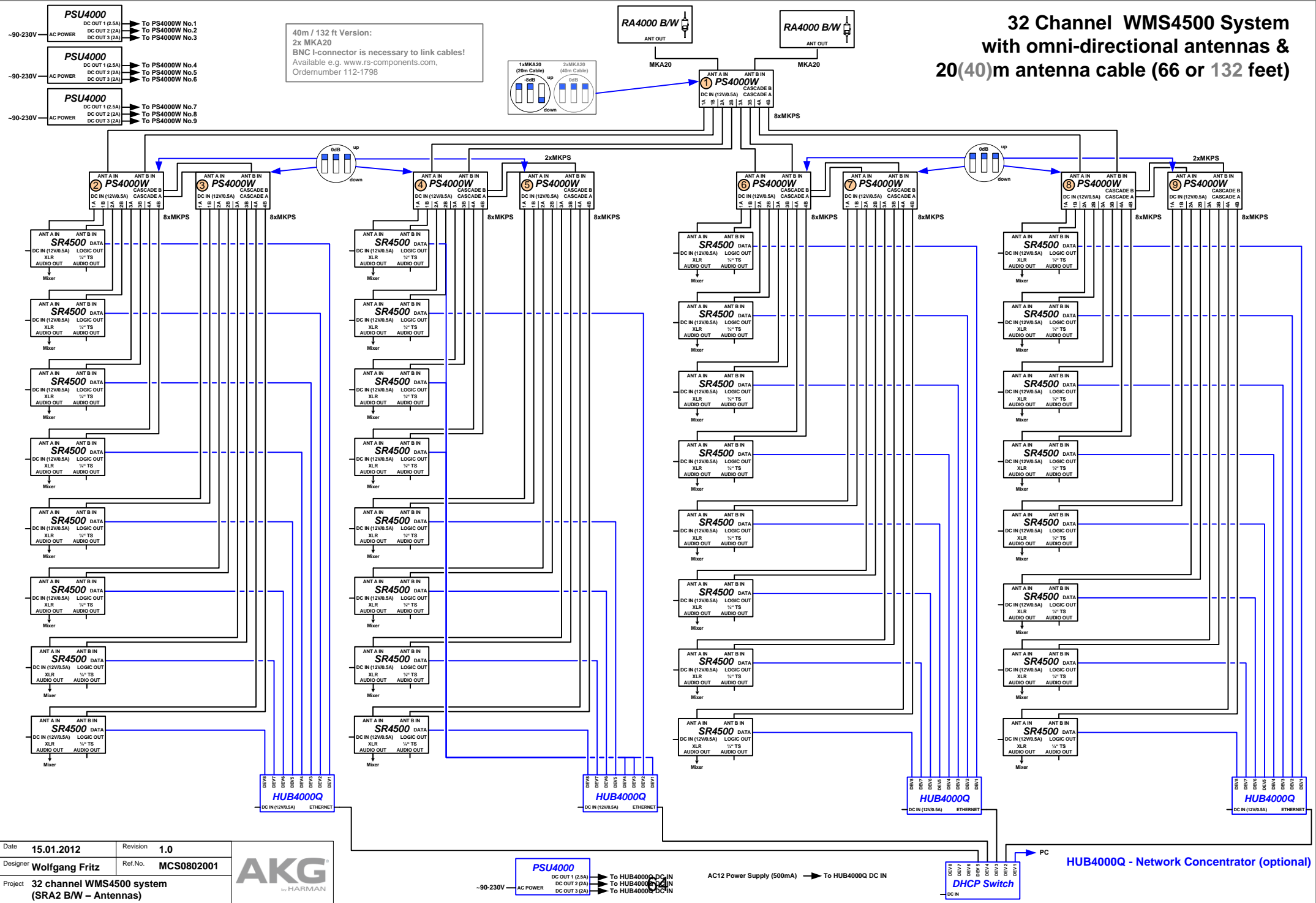
units	description	comment
32	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit
32	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!
9	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter
2	SRA 2 B/W	External directional active "paddle" antenna with amplifier (2 req.)
80	MK PS	Connecting cable for PS to SR 2.15ft (65cm)
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
3	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable

Additional parts for 40m(132feet) Antenna Cable		
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)

Optional Components

units	description	comment
16	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000, PS 4000 (you can also use a PSU4000
6	PSU4000	Central Power supply unit for powering up to 3 WMS 4000 HUB 4000, HPA 4000, CU 4000 or up
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 PS 4000, ASU4000, HUB 4000, HPA 4000 or SR 4000.
4	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)

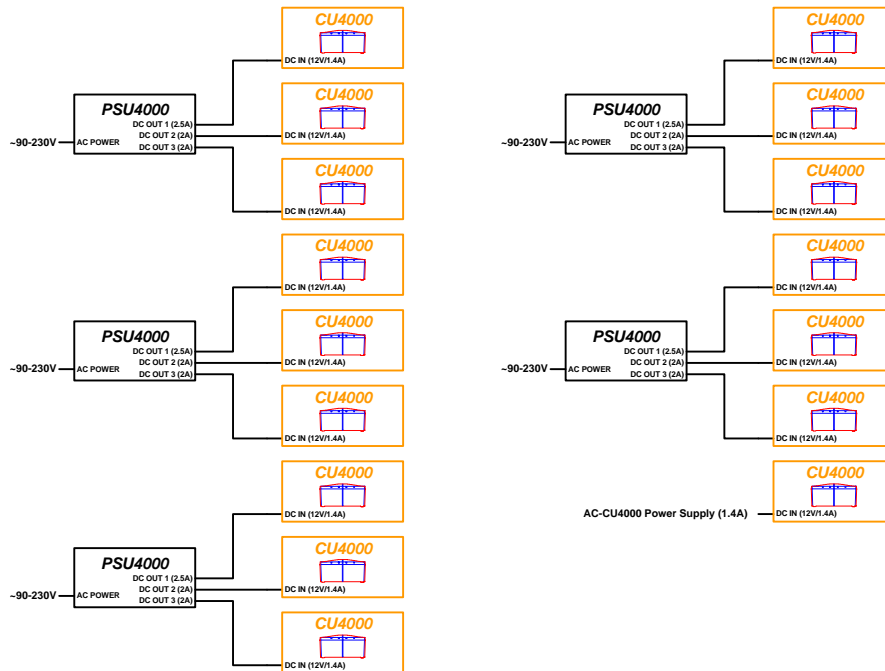
32 Channel WMS4500 System with omni-directional antennas & 20(40)m antenna cable (66 or 132 feet)



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref. No.	MCS0802001
Project	32 channel WMS4500 system (SRA2 B/W – Antennas)		

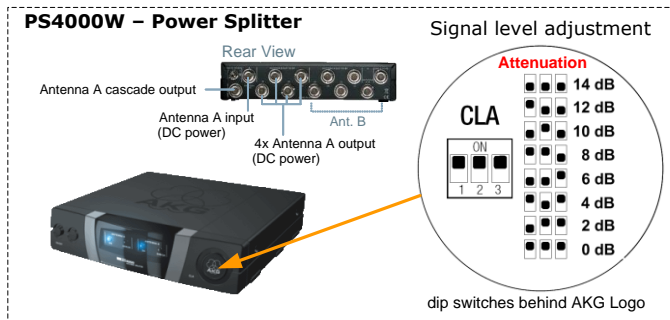


32 Channel WMS4500 Charging System



If you don't want to use PSU4000 for optional components, you can also use 16x AC-CU4000 Power Supply for CU4000's and 8x AC12 Power Supply for the HUB4000Q's and HPA4000's

PS4000W Technical Information



Date	15.01.2012	Revision	1.0
Designer	Wolfgang Fritz	Ref.No.	MCS0802001
Project	32 channel WMS4500 charging system		



32 Channel WMS4500 System with omni-directional antennas

units	description	comment	code
32	SR 4500	Half-rack receiver without AC-Adapter; (frequency range 500 to 863 MHz); 2 UHF antennas; RMU 4000 rack mounting kit	3000Z00..
32	HT 4500 or PT4500	Hand-held transmitter or Bodypack transmitter; (frequency range 500 to 863 MHz); SA 63 stand adapter; 2 AA size dry batteries Do not forget microphone head headset or other microphone !!	3001Z00.. 3002Z00..
9	PS4000 W	Wide band antenna multi coupler (4+1 out) without AC-Adapter	2996Z0008
2	RA4000 B/W	External omni-directional active dipoleantenna with amplifier (2 req.)	2632Z0030
80	MK PS	Connecting cable for PS to SR 2.15ft (65cm)	6000H0206
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58	6000H0205
3	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via PS4000W, Mains Cable	2997Z000...

Additional parts for 40m(132feet) Antenna Cable			
2	MKA 20	66 ft. (20m) Cables for connecting ext. antennas to multi-couplers (2 req.) KOAX RG58	6000H0205
2	BNC I-connector	EXTERNAL !! Not available at AKG - BNC I-Connector (you can buy it at www.rs-components.com , Ordernumber 112-1798)	

Optional Components

units	description	comment	code
16	CU 4000	Twin charger + 2 BP 4000 for HT 4000 & PT 4000; with AC Adapter. Please specify one of the AC- CU4000	2887Z0004
1	AC12 1500mA EU/US/UK	12V AC-Adapter (EU-Version) power supply CU4000 (you can also use a PSU4000 output)	7801H000...
6	PSU4000	Central Power supply unit for powering up to three HUB4000Q, CU4000 or up to 12 receivers via	2997Z000...
1	AC12 500mA EU/US/UK	12V AC-Adapter for 1 ASU4000, AB4000, HUB4000Q or SR4500.	7801H000...
4	HUB4000 Q / none	Network concentrator without AC-Adapter; of 8 systems	2955Z0014
1	DHCP Net Switch + CAT5 Cable	EXTERNAL !! Not available at AKG - for 4 input to 1 output (e.g. D-Link)	

Do not forget microphone head, headset or other microphone !!

HT4500: e.g. D5 WL-1, D7 WL-1, C5 WL-1, C535 WL-1

PT4500: e.g. C544L, C555L, C520L, C516ML, C518ML, C519ML, HC577 WR-L, CK77 WR-L, CK99L, C411L, C417L