



stage accompany

# STAGE ACCOMPANY NEWSLETTER no. 1

Newsletter of Stage Accompany International

April 1989

## Contract News

Last week Stage Accompany and Philips Holland signed a contract for the delivery of Stage Accompany equipment to ALL Philips companies over Europe.

Till now each company supplied a different brand of equipment (i.e. JBL, Turbo, Meyer, etc.). As Philips Holland is a regular Stage Accompany customer the management decided that Stage Accompany now has to be used as a standard all over Europe.

However, we will not supply this equipment without your support.

Stage Accompany and Philips agreed upon the following terms:

Each local Philips company orders directly with Stage Accompany Holland; you will be informed instantly.

Each shipment will be sent to our local agent (i.e. you), free of charge.

Our local agent (i.e. you) takes care of the interior shipment of the equipment (i.e. from your warehouse to the address the Philips company states); carriage forward (costs to be paid by Philips).

Support and service will be carried out by our local agent (i.e. you).

As you see, your involvement will be restricted to 3 major points:

- Receiving the goods at your warehouse.
- Arranging the interior transportation
- Support and service

Due to the special nature of this agreement and your limited involvement, your margin will be restricted to 4% of the nett order amount.

The turnover for the first year is an estimated dfl. 2.000.000,--.

## Product News

### ADP 8520/ADP 8525 ACTIVE DRIVER PROTECTION

The application of the 8520/8525 driver protections in our sound systems does not mean that diaphragms are protected for 100% under all circumstances.

We have noticed on many occasions that users do not bother at all when the ADP warning LED lights, but instead keep the signal at the same level or even turn it up more as the volume decreases (caused by the ADP).

Diaphragms cannot withstand such a heavy overload for a very long period and will burn eventually.

The ADP LED implies that the sound system is being overloaded, so the level has to be decreased. Occasional flickering does not do any harm, but severe overload MUST be avoided.

The ADP circuitry was designed to protect the diaphragm, and indeed performs very good, but no protection circuitry gets away with pure vandalism. Keep in mind, that NO guarantee will be granted on diaphragms which show severe burning. Please inform your customers about the correct use (or better: avoiding of the use) of the ADP.

### PERSONAL 4744 HiFi SYSTEM

Based on the MASTER 4544 studio monitor system SA recently introduced the PERSONAL HiFi System, comprising nearly the same components as the MASTER 4544, but with a different cabinet, cover and (grey 'metallic') finishing.

Approx. 30 of these systems were already installed in various bars, restaurants, record shops, etc.

Approx. 10 systems have been sold to Hi-end HiFi customers, so the first series of 40 units was sold out within 4 weeks.

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We are happy to inform you that from now on the PERSONAL 4744 systems are in stock ! (documentation will be available soon).

## USER & SERVICE MANUALS

User manuals on the PPE 2410 and Blue Box will be available in the English Language within a few weeks. Manuals will be packed with each unit leaving the factory, except in case we are informed that (for instance) many Blue Boxes are being shipped to 1 customer. It may be clear that it would be a complete waste if 1 customer receives 20 to 30 user manuals, each regarding the same subject.

Within 4 months all SA equipment will be accompanied by its own user-manual, all using the same user-friendly layout.

The PPE 2410 Service Manual is available now.

## COMPLAINTS

We strongly request to immediately report any serious complaints or remarks by FAX. NOT by telephone, and certainly NOT during an exhibition (that is not what exhibitions are for).

If complaints (or serious suggestions for improvements) are reported by fax we can take action immediately, calling in the right person(s). Complaints will no longer seriously be discussed at exhibitions as our representatives are not in a position to judge or commend your remarks.

Be sure that the SA staff takes every complaint and/or remark very serious, in order to keep the SA quality standard high !

### 4528 sub-low cabinet

As you may have noticed on the pricelist, the 4528 sub-low system has become available in 4 versions:

- 4528B2 wooden cabinet, blue finish (like 4527, 4529), 2x SA 1502 15" loudspeakers, Neutrik speakon connectors. Freq. range approx. 45 Hz - 2 kHz.
- 4528B3 wooden cabinet, blue finish (like 4527, 4529), 2x SA 1503 15" loudspeakers, Neutrik speakon connectors. Freq. range approx. 35 Hz - 1 kHz.
- 4528SB2 flightcased version, incl. castors, recessed handles, 2x SA 1502 15" loudspeakers, Neutrik speakon connectors. Freq. range approx. 45 Hz - 2 kHz.
- 4528SB3 flightcased version, incl. castors, recessed handles, 2x SA 1503 15" loudspeakers, Neutrik speakon connectors, Freq. range approx. 35 Hz - 1 kHz.

Preliminary documentation will be available on short notice; All types in stock in approx. 4 weeks.

### LEADER 4624, 4626, 4627

The LEADER 4624, 4626 and 4627 cabinets are all in stock at this moment, as are the flightcases in which 2 units can be transported.

### MASTER 4547

Thorough measurements showed that the bass ports of the MASTER 4547 cabinets were too long for an optimum low frequency reproduction.

The ideal length should be 19,5 cm. for each port. This length has been introduced to all 4547 cabinets from serial nr. 890247039. We advise you to check if and where you installed 4547 monitors with lower serial nrs. (or before febr.1989) and adjust the port length.

### PPE 2410

Some of the earlier PPE 2410 equalisers (ID.nos.: 1 up to and including 31) may suffer from a slight problem. In order to keep the EQ boards in its place, a piece of foam is mounted inside the cover. With some PPE's this piece of foam is too thin. During transportation it is possible that the EQ boards move out of their sockets and loose contact.

This is no serious matter; pushing the prints back into their sockets solves the problem. To avoid further problems with these PPE's, stick a piece of foam on top of the other piece.

With the first series of PPE 2410's (ID.nos.: 1 up to and including 31) the transformer voltage is slightly too low. This causes the PPE to reset at a voltage of < 195 V, which should be at < 180 V.

Under poor (mains) conditions these PPE's might fail: no sound is being passed during a short while. If you encountered any problems with these PPE's working under poor conditions, the transformer should be replaced. New transformers are available free of charge; the 'old' ones have to be returned to SA.

This failure was discovered by our r&d dept.; no complaints of users have reached us so far.

### PPE 2410 parallel/series filter configuration: a brief explanation

The design of an equaliser can be based on one of two configurations: the parallel or the series filter configuration. In the parallel configuration the filter outputs are all added to or subtracted from the original signal. In the series filter configuration the filter outputs are individually added to or subtracted from the original signal.

Until now Stage Accompany provided the PPE-2410 with a parallel filter configuration because of its simplicity and good signal to noise ratio.

However the parallel filter configuration has some disadvantages. The output signals of the filters affect each other when they are added to or subtracted from the original signal.

This results in frequency curves that would not be expected on the basis of the programmed equaliser parameters. Furthermore the individual amplifications and attenuations in dB's of bands adjusted to the same frequency may not be added to calculate the overall equaliser response.

The series filter configuration does not have all these disadvantages but usually has a decreased signal to noise ratio because there are more operational amplifiers in the signal path.

Stage Accompany now have developed a series filter configuration with the same signal to noise ratio as the parallel filter configuration. This configuration will be installed in the PPE-2410's with an ID-code > 91.

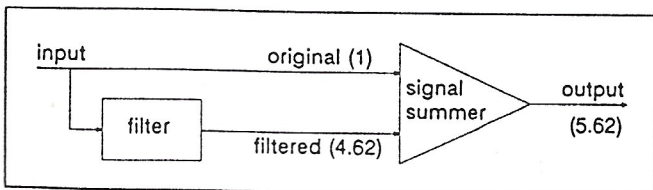
All PPE-2410's with an ID-code from 1 up to and including 91 have a parallel filter configuration. However, the parallel filter configuration board can be easily replaced by a series filter configuration board. Installation instructions will follow as soon as the series filter configuration board is available.

#### Parallel filter configuration example 1:

Suppose the parameters of the parallel filter configuration equaliser have the following values:

- boost/cut1 = +15 dB, frequency1 = 600 Hz, Q-factor1 = 1.0
- boost/cut2 = +15 dB, frequency2 = 600 Hz, Q-factor2 = 1.0
- boost/cut3 = 0 dB, frequency3 = 600 Hz, Q-factor3 = 1.0
- boost/cut4 = 0 dB, frequency4 = 600 Hz, Q-factor4 = 1.0

We would expect that a 600 Hz signal is amplified with 30 dB. However this is not the case because the filter outputs are **summed!** A brief calculation will explain this.



A 15 dB amplification relates to a factor of 5.62. Because the original signal represents a value of 1, the filter output must have a signal of 4.62 times the original signal (5.62 - 1). When the filter output signal is added to the original signal, the total amplification of the signal will be 5.62 (4.62 + 1) which represents 15 dB amplification.

In this example we have two bands with the same frequency and amplification. So the values of both the filtered signals is 4.62. Because these filtered signals are

added to the original signal the total signal becomes 10.24 (4.62 + 4.62 + 1). The factor 10.24 represents an amplification factor of 20.2 dB which is far from 30 dB!

#### Parallel filter configuration example 2:

Suppose the parameters of the parallel filter configuration equaliser have the following values:

- boost/cut1 = -15 dB, frequency1 = 600 Hz, Q-factor1 = 1.0
- boost/cut2 = -15 dB, frequency2 = 600 Hz, Q-factor2 = 1.0
- boost/cut3 = -15 dB, frequency3 = 600 Hz, Q-factor3 = 1.0
- boost/cut4 = 0 dB, frequency4 = 600 Hz, Q-factor4 = 1.0

We would expect that a 600 Hz signal is attenuated with 45 dB. However this is not the case because the filter outputs are summed! A brief calculation will again explain this.

A 15 dB attenuation relates to a factor of 0.18. Because the original signal represents a value of 1, the filter output must have a signal of -0.82 times the original signal (0.18 - 1). When the filter output signal is added to the original signal, the total amplification of the signal will be 0.18 (-0.82 + 1) which represents 15 dB attenuation.

In this example we have three bands with the same frequency and attenuation. So the values of all three the filtered signals is -0.82. Because these filtered signals are added to the original signal the total signal becomes -1.46 (-0.82 + -0.82 + -0.82 + 1). The factor -1.46 represents an amplification factor of 3.29 dB which is very far from -45 dB! We expected an attenuation but we got an amplification of the signal. The phase of the signal has been inverted as well (the minus sign). This example shows that you have to be very careful when adjusting different equaliser bands to (nearly) the same frequency.

The resulting frequency response can be very different from the expected response.

#### Series filter configuration example 1:

Suppose the parameters of the series filter configuration equaliser have the following values:

- boost/cut1 = +15 dB, frequency1 = 600 Hz, Q-factor1 = 1.0
- boost/cut2 = +15 dB, frequency2 = 600 Hz, Q-factor2 = 1.0
- boost/cut3 = +15 dB, frequency3 = 600 Hz, Q-factor3 = 1.0
- boost/cut4 = 0 dB, frequency4 = 600 Hz, Q-factor4 = 1.0

The figure shown in the parallel filter configuration example is cascaded four times in the series filter configuration. We would expect that a 600 Hz signal is amplified with 45 dB. In this case that is true, as a brief calculation will explain.

Because the filters are cascaded the amplification factors of 5.62 must be **multiplied** in stead of summed. The total factor becomes  $5.62 \times 5.62 \times 5.62 = 177.5$  which represents an amplification of 45 dB.

#### Series filter configuration example 2:

Suppose the parameters of the series filter configuration equaliser have the following values:

- boost/cut1 = -15 dB, frequency1 = 600 Hz, Q-factor1 = 1.0
- boost/cut2 = -15 dB, frequency2 = 600 Hz, Q-factor2 = 1.0
- boost/cut3 = -15 dB, frequency3 = 600 Hz, Q-factor3 = 1.0
- boost/cut4 = 0 dB, frequency4 = 600 Hz, Q-factor4 = 1.0

We would expect that a 600 Hz signal is attenuated with 45 dB which is true.

Because the filters are cascaded the amplification factors of 0.18 must be **multiplied** in stead of summed. The total factor becomes  $0.18 \times 0.18 \times 0.18 = 0.0058$  which represents an attenuation of 45 dB.

It is clear that the series filter configuration does not have the previous mentioned disadvantages.

PPE 2410 Service Manuals are available within 2 weeks.

## FOAM COVERS

The foam covers of Blue Box, Champion and Leader series turn out to be flammable after painting. Cigarettes will do no harm, but explosions from pyrotechnic fireworks, cigaret lighters, etc. will set the covers on fire.

Some weeks ago we started treating the covers with a special liquid called HCA 1. After treatment the covers will NOT burn.

If you think it necessary to treat covers of Blue Boxes and/or Champions/Leaders which are in use with your customers, this liquid can be ordered under nr. 7050.0001, price: Dfl. 40,- per liter.

The liquid can be sprayed without special equipment; a simple siphon or plant sprayer will do. Use the liquid sparsely, as too much of the inflammable residue will clearly show fingerprints on the cover. Little is needed for the best result.

# Market News

## AMERICA

2 Master 4547 studio monitors were sold to the famous Warner Brothers Studio's in Amerika. More sales to American customers are expected on short notice.

Keyboard player Christopher Currell used 2 Blue Boxes during the recent Michael Jackson world tour. Due to the efforts of our UK agent Anthony G. Morris, who contacted the band before the Wembley Stadium concerts. Christopher became aware of the sound quality of the Blue Box. Specially since he played 2 (!) high-tech Synclaviers during the show, he was looking for a perfect keyboard monitor system. From their first Wembley appearance on, throughout the rest of the world tour, he used Blue Boxes. The tour has ended some weeks ago, and Christopher assured us that the Blue Boxes will be used in their studio, until the next tour.

## GREECE

Once a month Dutch Television Company TROS is broadcasting a special export program in which 6 companies are being presented, who have done special projects and/or tradings in a particular country. Each month spotlights are on one specific country, ranging from Germany to China.

On April 14th. Greece is the subject and Stage Accompany will be in it.

Recordings were made on the 23th. of March in our factory. Our Greek agent, Ichos arranged a live gig in a discotheque in Athens, which was recorded on the 25th. of March.

The equipment (Blue Boxes, mixing consoles, Leader monitoring system, etc.) was provided by Stage Rent, our international rental company.

On the 10th. of April the studio interviews are to be recorded. The 'STAGE ACCOMPANY' item will be broadcasted for approx. 6 minutes, meaning 6 minutes of free publicity.

## FRANCE

Within 2 months the Asterix amusement parc, near Paris will open its gates. The sound equipment used in the pavillions was installed by our French agent C.A.W. Sonoss.

2 Stage Accompany computer systems, Blue Boxes, Champion 4529's, PPA 1200 amplifiers and PPE 2410 equalizers are used.

The Asterix parc will be gradually expanded during the coming years, as will the sound system.

## HUNGARY

60 special (mostly large) Flightcases were ordered by the Hungarian Gerstbauer company. Gerstbauer has offices in Austria, Hungary and Bulgaria and is a.o. importer of Steinway pianos and grands.

These 60 cases were sold to an Hungarian symphonic orchestra. Some (smaller) orders for special cases were placed in the mean time and more big orders are to be expected on short notice, as Gerstbauer (and their client) were very pleased with the high S.A. quality standard and rapid delivery of the first order.

## GERMANY

The AES convention at Hamburg has proved very successful. Interesting contacts were made with important people from the pro audio industry, such as state-of-the-art studios and broadcasting companies. Very promising meetings were held with state broadcasting companies from eastern Europe, such as Poland and Hungary.

Both countries urgently need a replacement for their studio monitor systems and were very impressed by our MASTER series studio monitors. The Hungarian delegation also visited our factory right before they went to Hamburg.

## HOLLAND

Recently the large 'Metropool' discotheque at Zaandam, with a capacity of 3800 visitors opened. 'Metropool' is the first Stage Accompany project in which sound, light and video were integrated into one system.

28x Blue Box, 8x Champion 4524, 8x Personal 4744 HiFi System, 10x PPA 1200 amplifier, 8x PPE 2410 equaliser, 4x SA 900C, 6x Leader 4626 floor monitor systems (for 'live' acts), are all controlled by the S.A. PC.

Light was installed by the Swiss company Stage Light, in cooperation with Stage Accompany.

Finally a huge, PC controlled Stage Wall (Vidiwall) in an 8x6 configuration (48 screens) was installed.

'Metropool' appears to be a tremendous succes, as the weekly turnover is far above expectations.

In the near future 'Metropool' will be used by Stage Accompany as an instruction, meeting and demonstration room.

Eurosound Mobile 3 studio, designed by our acoustical expert Ben Kok and equipped with a MASTER 4744/SA 900C monitor system has already been used by many 'rock stars', such as Prince, Michael Jackson, George Michael, Sting, etc.

Mobile 3 will soon have 2 competitors to deal with: Mobile 1 and Mobile 2. Both trucks will be operational soon, and are also equipped with MASTER 4744/SA 900C monitor systems. Finally 2 larger non-mobile Eurosound studios will be equipped with MASTER 4744/PPA 1200 monitor systems.

Dutch broadcast company N.O.B.'s latest mobile studio is soon to be equipped with a SA MASTER 4744/SA 900 monitor system.

## Exhibition News

SIEL, Paris (F)	April 9th.-12th.
SIB, Rimini (I)	April 10th.-13th.
IM&MC*, Amsterdam (NL)	April 30st.-May 3rd.
EXPO MUSICA, Madrid (E)	May 17th.-21st.

\*IM&MC conference was formerly held at Montreux, in cooperation with a.o. the 'Golden Rose' festival organisation.

IM&MC organizer, Music & Media/Billboard decided to move this conference to Amsterdam because of the better facilities and Holland Promotion of the Dutch based IMM company. This exhibition will be visited by the 'top' of the broadcasting/media/record industries, as well as their 'top' artists. Various radio and tv companies (BBC UK, Veronica, NOB NL) present 'live' performances and interviews with artists. At the last evening (May 3rd.) IM&MC organizes a concert at the famous 'Carré' théâtre with a.o. Joe Jackson, the Jacksons, Bananarama, and many others. This concert will be broadcasted 'live' by the Dutch TV and recorded for later broadcast abroad.

Visitors of the conference are registered previously; their names are mentioned in the IM&MC conference guide. If you or your best clients (or prospects) are interested in visiting the exhibition, please inform us immediately! Their (and your) names are then mentioned in the guide, between those of some of the world's most famous artists!

## New Distributors

### TAIWAN

TAISHENG TRADING CORPORATION

Wantai Building, 4th. Floor

24, Jilin Road

TAIPEI, TAIWAN 10424, ROC

Mr. Victor S. Lu is our new distributor in Taiwan. The first order of a.o. Blue Boxes, Personal HiFi Systems, SA 900C and PPE 2410 was shipped recently.

We trust mr. Lu and his staff will be very succesful in representing Stage Accompany in Taiwan.

### KOREA

ANGEL MUSICAL INSTRUMENT CO., LTD.

Trade Center, P.O. Box 16

SEOUL

KOREA

Mr. S.K. Kim is our new distributor in Korea.

The first order of a.o. 10 Blue Boxes has been shipped. We wish mr. Kim and his staff succes in representing Stage Accompany in Korea.

**ICELAND**

RAFIS HF

Armúla 7 (P.O. Box 8140)

108 REYKJAVIK 128 REYKJAVIK

Mr. S. Gudjansen is our new distributor in Iceland. The company recently installed their first SA equipment in a theatre project. Rafis HF is an established company. One of their major projects was the installation of a large computerized sound system at the Iceland Air Terminal building, last year.

**MORE INTERNATIONAL NEWS**

If you have interesting news to report, contracts, special installations, interesting facts, etc. please inform us. We will report your info in our next STAGE ACCOMPANY NEWS issue so your international colleagues are being well informed.

**Int. Distributors****Belgium**

STAGE ACCOMPANY INTERNATIONAL

Hoorn (The Netherlands)

 tel.: (0)2290-12542  
 fax.: (0)2290-11192
**Denmark**

STAGE ACCOMPANY SCANDINAVIA

TONKRAFT

GOTEBORG (Sweden)

 tel.: (0)31-134 950  
 fax.: (0)31-113 472
**Germany**

STAGE ACCOMPANY DEUTSCHLAND

NORDHORN

 tel.: (0)5921-16196  
 fax.: (0)5921-77580
**England**

STAGE ACCOMPANY UK

CAMBRIDGE

 tel.: (0)3536-62278  
 fax.: (0)3536-67637
**España**

STAGE ACCOMPANY ESPAÑA

BARCELONA

 tel.: (0)3-3177 066  
 fax.: (0)3-2178 184
**Greece**

ICHOS

ATHENS

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 fax.: (0)1-821 6606
**Hong Kong**

STUDER REVOX

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 fax.: (0)5-8151 735
**Iceland**

RAFIS HF

REYKJAVIK

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 fax.: 354-1-689925
**Israel**

KILIM &amp; SONS LTD.

HAIFA

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 fax.: (0)4-672 911
**Italia**

KENNELL S.N.C

TORINO

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 fax.: (0)11-612 148
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