



ALPHA

Digital

DX 300 – The New Way
to Experience Music



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... the Orchestra with a Future

The ALPHA DX 300 combines the features of the legendary Wersi organs HELIOS or GALAXY with the future-oriented capabilities of digital electronics. And we did not stop half way into the future: The most advanced technologies are employed in the ALPHA DX 300 in a convincing yet easy to master fashion. The ALPHA DX 300 represents a new dimension among the Wersi organ models. That means, the ALPHA DX 300 contains a remarkable array of musical capabilities, unique and previously unknown in its class.

Of course, the ALPHA DX 300 possesses all well known Wersi features like the famous drawbar sounds and the authentic voices of the fixed stops. The timbre of classical musical instruments such as violin, trumpet, piano and many more have been preserved and, in many cases, improved.

The differences between the organ's rendition of an instrument and its acoustical counterpart can only be measured by analytical methods. The human ear can hardly notice any discrepancy. The secret is found in the Wersi DMS system (Digital Music Sound). It allows the nearly perfect synthesis of any desired voice – at any time. Even the subtle nuances between an "Amati" and a "Stradivari" violin can be recreated.

All voices of the organ can be blended together in any combination by means of the integrated music computer. Truly new sounds can be generated this way, an endeavor that used to require the use of complex sound studio equipment.

Several patents testify to the high standards of technical achievement. Dozens have been filed worldwide, or are pending. We expect numerous new patents as a result of the research for the ALPHA, documenting the extraordinary achievements. Naturally, we are proud of this. But more importantly, we feel that our customers deserve the confidence of owning an instrument that allows impressive renditions for both the hobby musician as well as the professional.

The ALPHA DX 300 also sets new milestones in the area of easy do-it-yourself assembly. A few clearly laid out plug-in circuit boards are joined by a printed backplane board. Half a dozen prefabricated ribbon cables complete the wiring. They are simply plugged onto connectors – there is nothing to it. The assembly manual from authors with many years experience make the kit assembly easier than a jigsaw puzzle. The ALPHA goes together fast and without fuss.

A carefully designed diagnostic test method assures comprehensive testing of all assembly phases without the effort required for earlier organ generations. Every time the organ's power is turned on, it undergoes a self test, resulting in an assuring "OK" on its display.

The timeless styling of the cabinets emphasizes the valuable contents. Like the other Wersi organs, the ALPHA DX 300 truly is "Made in Germany". Top quality components, solid engineering and excellent craftsmanship.

The ALPHA DX 300 sets new marks in a technical and musical sense and – as a pleasant surprise – also financially. There is simply no other instrument that offers comparable features for such a low price tag.

The ALPHA DX 300 makes you the proud owner of an extraordinary instrument for your home, sound studio, stage or wherever any type of keyboard sound is needed. The future becomes reality today.

"Digital" has become the byword for perfection. The most advanced recording and receiving equipment, cassettes and LP's are turning to digital techniques. Why? There is no other method of information transfer that assures greater fidelity and immunity against disturbances than the digital technology.

However, it is important that the digital principles are employed throughout. It does not make sense just to "digitize" certain internal functions and mix in analog circuits in more or less random arrays. The ALPHA DX 300 is designed as a truly digital instrument throughout. Only at the very end of the chain of events, after the sounds are completely "made" the digital signals are converted to analog (audible) signals.

This rigorous scheme results in the greatest design flexibility and makes it possible to achieve a performance spectrum that, heretofore, was only attributed to instruments of the top class like COMET, HELIOS or GALAXY.

ALPHA

Digital

DX 300

Pocket calculators, digital watches and similar products have excelled as being rugged and reliable devices. Other advantages are low power consumption and longevity. The ALPHA DX 300 employs the same technology assuring unblemished joy while building and playing the instrument.

It may be more important yet to mention that the ALPHA DX 300 is ready to "learn" more than it already "knows". New voices or new sound effects can be entered anytime by means of "Software cassettes" or any external computer. We believe that the proverbial Fountain of Youth has finally dawned for the keyboard instrument.



Selectors

Now for the ALPHA DX 300. All voices (including drawbar sounds and synthesizer voices) can be assigned to any or all of upper or lower manual, pedals or accompaniment. The volume of each voice is adjustable individually.

Total Presets

Change the entire organ's registration with a single button! Six totally different master registrations can be preset and allow all-encompassing sound changes in the blink of an eye.

Digital Voice Design

There are 13 programmable voices the character of which you can

determine either by using the organ's own resources, a sound cassette or an external computer.

Method No. 1: New sounds are generated from existing sounds through the built-in Wersi Music Computer. Finally, the result can be modified by means of numerous special effects. If you want to preserve the new creation for future use you may "store" it into one of the programmable voice registers and/or computer register.

Method Nos. 2 + 3: Using an external personal computer and Wersi software, you can create totally new voices (see inside back cover). Up to nine of these voices can be made available as "Computer Voices" and are at your disposal anytime. Addi-

tional voices could be stored on cassette or disks. The computer interface of the ALPHA DX 300 (RS 232) is also used to accept new suggestions from Wersi artists via standard audio cassettes. By the way, all variable registrations like drawbar settings and other adjustable values can also be recorded and re-entered.

DMS Instruments

The 39 so-called fixed stops contain the most important orchestral instruments and a few combinations (e.g. strings and piano).

Each sound is divided into two time-dependent components, namely the sound attack and the steady-state sound. The characteristics of both

components are adjustable individually to suit the instrument in question as well as your personal taste.

DMS Controls

Of course, the ALPHA DX 300 also features the well-known special effects of earlier Wersi's like the integrated WERSIVOICE (rotating speaker sound and string orchestra sound), key click, VCF modulation and much more. Optionally, the ALPHA DX 300 can be equipped with the proven triple spring reverb system or the universal Wersi digital reverb.

Code Programming

The built-in Music Computer allows a myriad of sound mixing. Almost

limitless variations are possible through combinations of voices and/or sound components.

The use of the Music Computer is remarkably simple: by means of the five code switches "W-E-R-S-I", you determine the way the voices and their components are combined.

Programmable Drawbar System

The new programmable drawbar system from Wersi does away with different number of footages for each of the manuals or pedals. Both manuals as well as the pedals are equipped with nine footages (expandable to 28 by internal programming). The famous Wersi drawbar sound can even be coupled with the auto-accompaniment. All drawbar footages are also available for percussion. Each drawbar setting can be stored and recalled digitally

Choir Register

The background choir register is an additional remarkable feature of the ALPHA DX 300. Individual vocals can be blended in a true additive fashion, resulting in a multi-voiced choir of the type found in very often used.

e.g. its brilliance can be adjusted in several steps.

Rhythm and Autoaccompaniment CX 3

The "CX 3" basically has the same features as the successful CX 1 and CX 2. Digitally stored rhythm instruments ensure authentic sound reproduction. All rhythm patterns are programmable, that is, the background orchestra can match any type of music you play. The first 15 rhythms are programmed by means of a factory-supplied data cassette. An unlimited number of additional patterns can be programmed by yourself, stored on cassette or can be "entered" from future Wersi data cassettes.

Extensive sequences of different rhythms can be pre-programmed and recalled later. Rhythm introductions and breaks are programmable too and make the background orchestra come to life.

The CX 3 has a new feature over its predecessors: The autoaccompaniment can use every voice of the organ including the choir voice. Melodies played on one of the manuals are memorized by the CX 3 for inclusion into the background accompaniment. Chromatic glissandos, arpeggios and automatic chord progressions are also possible.

Slide Controls

Three slide controls are used to vary

the functions. Two controls balance the solo and chord voices of the auto-accompaniment against the other organ sounds. Another slide control affects the volume of the pedals or the bass accompaniment. The attack and steady-state sound components of each manual can also be adjusted with two controls for each manual.

Cassette Interfaces

None of the new sounds you created yourself should ever be "forgotten". Normally, the new creations are stored in the memory of the Digital Voice Design section. However, this memory content can also be stored on an audio cassette, using an ordinary cassette recorder.

New voices can also be entered into the ALPHA DX 300 from cassettes that may have been recorded by our prominent artists like Frans Lambert, Gun Frim, Raim Wunderlich and Andy Zehnpfening.

Transposer

A crystal-controlled frequency stand-off ensures a perfect tuning of the entire organ to "middle A" or to the pitch you select yourself. The transposer allows the deviation of the master tuning in calibrated half-tone steps.

Microphone Mixer

A built-in audio mixer can be used to blend a microphone input in volume and tone into the organ's own sounds.

WERSICHOORD

WERSICHOORD is the name for an automatic chord system. Any chord played in the lower manual automatically transfers to a single note played on the upper manual. This makes it possible to get full chord sounds by playing single notes. Also, fast runs on the upper manual can be played in full chord sounds. The registration sound of the WERSICHOORD harmony can either be different or the same as the single note.

- All voices assignable to either manual, pedals and autoaccompaniment.
- Many special effects (including VCF, VCA and WERSIVOICE).
- Automatic rhythm unit with digitally stored instruments.
- Any number of rhythm patterns are programmable and can be stored on and recalled from cassette.

ALPHA Digital DX 300

The unbelievable organ which stays young

- An organ with true-to-life voices, brilliant solo registers, famous Wersi drawbar sound and much more.
- Unlimited new sound variations (incl. drawbars and special effects) by means of the built-in computer.
- All functions and sound parameters are programmable and can be stored (drawbar setting too).
- Many organ functions and sounds available at any time through simple software changes.
- 6 total organ registrations can be preset.
- Autoaccompaniment can use all organ voices; accompaniment patterns are programmable from any manual.
- New type of keyboards with improved response.
- Clear layout of all controls and elegant styling (S-model: soft illumination).
- Very easy do-it-yourself assembly through plug-in board design with printed wiring.
- Diagnostic programs for testing of all building blocks.
- Amazingly low price.



ALPHA DX 300 in the Home . . .



A sensible and functional design complement the elegant appearance of the ALPHA DX 300. The cabinet lines are well balanced and the accent grooves enhance the furniture look. The ALPHA DX 300 fits easily into any decor in your home.

There are many practical features: Indirect non-glare illumination (S-model), ergonomically designed drawbars and glide controls. The custom designed switches with their large touch surfaces and integrated red and green LED's make it easy to change registrations quickly. The controls are grouped into functional



groups and fields. The clear legends allow even the beginner to "feel at home" on the instrument. The musicians will appreciate the newly developed keyboard with its piano-like response and the precise lateral key guides.

ALPHA DMS-SYSTEM

Highest sound perfection through free programmable voicing:

- 54 factory-programmed voices (fixed stops, drawbars, synthesizer sounds and more)
- Thousands of new sound variations, mixable internally or addable from outside.
- Additional sound capabilities through Wersi Sound Cassettes.



The Easy Way Toward an Organ You Build Yourself

The Easy Way Toward an Organ You Build Yourself.

- The ALPHA DX 300 in kit form offers:
- An economical way to acquire an organ with most advanced features;
- A truly easy way to build.

It is playable after a few hours

To get started with your musical adventures, you merely need the Kits Paks of the basic model. It takes just a few hours to assemble the cir-

cuit boards, mount a few mechanical parts and you are ready to start playing. Many years of Wersi's experience are behind the engineering and the detailed assembly manual.

Exciting Expansion Capabilities

The ALPHA DX 300 can be expanded step-by-step, adding interesting features with each sound module

- Special effects group
- Reverb system
- Rhythm and autoaccompaniment

- Up to three slave processors that multiply the available voices for all manuals.

The sound modules, each consisting of a standard plug-in board, are to be assembled and are simply plugged into the card rack. They are ready to be used.

Finally, here is additional information for those who really want to get technical. The digital electronics have revolutionized kit building. The electronics of a fully equipped ALPHA DX 300 fits onto ten plug-in boards. Gold

plated edge connectors assure a reliable connection between the boards.

The wiring between the plug-in boards is accomplished by means of a printed backplane. Gone are the wiring harnesses of yesteryear. The remaining connections to the key-boards, the control panel and the pedals are made with a few pre-fabricated ribbon cables.

The detailed assembly manual starts with a few fundamental explanations about the organ's operating principles. Step-by-step illustrated assembly instructions follow. Finally, detailed instructions for the operation and registration complete the manual.

The ALPHA DX 300 includes an integrated diagnostic and testing system, enabling you to verify the proper operation of each assembly

phase. In addition an automatic self test after the power is turned on checks out all systems and results in a corresponding sign on message.

ALPHA DX 300 - viable today and tomorrow

The ALPHA DX 300 is capable of "learning" (that is it can accept new programs) new sounds as they become available. It is conceivable that today's taste for sounds may change tomorrow. The ALPHA DX 300 is ready to be "debristed" and re-programmed.

The ALPHA DX 300 can learn in any of three ways:

1. Via the built-in Wersi Music Computer. You can "talk" to the music

computer by means of the five switches "W-E-R-S-I". Existing sound can be modified or mixed together and combined with many special effects. In addition, the attack behavior and the steady state characteristics of any sound can be varied in a myriad ways through slide controls. The resulting sound or, rather the parameters of the sound can be stored in the computer's memory.

2. Via the Wersi Sound Cassettes. Wersi will supply cassettes that contain new sounds and registrations, arranged by Wersi's top artists like Franz Lambert, Curt Prina, Klaus Wunderlich, Ady Zehnpenning and others. Using an ordinary cassette recorder, the new features can be fed to the ALPHA DX 300 in a few minutes.

3. Via a personal computer. The ALPHA DX 300 has a standard RS 232 serial interface where an external computer can be connected to the organ in a communications mode. You may want to write the software yourself or you can acquire software packages from Wersi.

ALPHA Digital DX 300

Connecting a personal computer to the ALPHA DX 300 opens entirely new perspectives to the music scene. You can teach the organ new sounds, new registrations or new presets. Or, depending on the computer used, the organ's "contents" could be displayed alpha-numerically or graphically.

The future of this marriage between computer and music is subject to your imagination only.

M.I.D.I. = musical instrument digital interface
= standard connection to couple other digital musical instruments

The ALPHA organ can send and receive M.I.D.I. data
upper manual: voicing, key and volume information
lower manual: voicing, key and volume information
pedal: key information (instrument and preset location).

Specifications

Standard Model

DX 300 S Cabinet in genuine Walnut veneer
Accessory: Smoked acrylic cover
42" wide x 36" high x 24" deep, weight: 114 lbs.

Portable Model

DX 300 T Rugged enclosure (low profile), dark resin coating, chromed steel leg assembly (adjustable)
Accessories: Carrying pouches for instrument and leg assembly
42" wide x 28 1/2" high x 25" deep, weight: 65 lbs (w/o legs)

Basic Features

3-12 octaves, 3 manuals (44 keys each) with slanted key tips; upper manual offset by an octave;
120 push button switches with red or green LED indicators; very large touch surface

Broadband power amplifier 25 Watts continuous rating

DX 300 S 12 pedal drawbar (standard)
non glare illumination
two-way speaker system

DX 300 T (broadband speaker and piezo-ceramic tweeter)
2 built in broadband monitor speakers

Interfaces

Front: jacks for headphones, recorder and microphone
Other: AC input (with voltage selector), connectors for pedals, RS 232 serial port, volume pedal, audio output and M.I.D.I. interface

Registration

- Wersi Programmable Drawbar System
 - 9 drawbars (W, F, S, A, 2, 3, 4, 5, 6, 7)
 - assignable to each manual, pedal or accompaniment
 - all drawbar settings programmable and storable
 - all drawbar footages available for percussion

DMS Instruments

- 54 fixed stops (solo voices and combinations)
- thousands of variations possible through modification of the attack and steady state components

DIGITAL-VOICE DESIGN

- New sound combinations can be created by any of three methods:
 1. By built-in Music computer (CODE PROGRAMMING)
 2. By Wersi Sound Cassettes
 3. By using an external personal computer
- PROGRAM VOICES: 4 registers can memorize new sounds that were created by the Music Computer.

- COMPUTER VOICES: 9 registers are available to store sounds coming from an external computer or from Wersi Data Cassettes (register contents can also be stored externally)

Total Presets

- 6 total organ registrations can be stored as presets (can be changed anytime)

DMS Controls (Special Effects)

- KCF effects (each real)
 - WERSIVOICE (vibrato and choir effects)
 - Reverb
 - optional spring reverb or
 - Wersi digital reverb with echo modes
 - BRIGHT (two-stage brightness control)
 - TRANSPOSE/PITCH (Tuning in half-tone steps)
 - CODE PROGRAMMING (integrated Music Computer for combining of existing voices into new sounds)
 - Key Click
 - DISTORTION (soft clipping for guitar voices)
 - PERCUSSION (9 drawbars for each manual and pedals)
 - OCTAVE SHIFT (expansion of the pitch range; 4th octaves for manuals and 2 octaves for pedals)
 - WERSISCHORD

Rhythm and Autoaccompaniment WERSIMATIC CX 3

Rhythms

- Unlimited programmable: 18 standard rhythms are supplied from factory
- Digitally stored instruments (bass drum, snare loud/soft, hi-hat/loft, cymbal, tom-tom high/low, bongos, cowbell)
- Programmable introduction (2 bars) and break (2 bars) for each rhythm
- Sequencer (up to 16 sequences)
- Preset tempo for each rhythm
- Semi-automatic start or synchronized start
- Snare roll

Autoaccompaniment

- All organ voices can be used for the accompaniment
- Patterns are programmable from the lower manual
- Bass, chords and arpeggios (solo)

Microphone Amplifier

- Volume control
- Bass control (± 12 dB)
- Treble control (± 12 dB)
- Reverb intensity
- Playback volume control



Listen yourself to the many musical features of Wersi organs and pianos!

Wersi operates with its own companies and importers throughout the world.

Wersi Headquarters

West Germany

Wersi-electronic GmbH & Co KG
— Export division —
Industriestraße
D-5401 Halsenbach/Hunsrück
Tel. 6747/7131, Telex 42323 · 42324

Belgium

Wersi electronic nv/sa
Industriepark
B-3980 Tessenderlo
Tel. 013/66.31.06 (2 l.), Telex 39961

Netherlands

Wersi electronic Nederland B. V.
Zuiderinslag 4
NL-3871 MR Hoewelaken
Tel. 03495-37111
Telex 79326 Wersi NL

Switzerland

Wersi-electronic AG
Kauenstraße
CH-8887 Mels
Tel. 085/25050
Telex 855795

Wersi-electronic
Vorfür- und Beratungsstudio
Limmatstraße 275
CH-8005 Zürich
Tel. 01/428585

Wersi-electronic
Vorfür- und Beratungsstudio
Eigerstraße 80
CH-3007 Bern
Tel. 031/454848

Austria

Wersi-electronic Ges.m.b.H.
Zentrale Österreich
Ortsstraße 18
A-2331 Vösendorf
Tel. 0222/673350, Telex 133519

Wersi Shopping Center
A-2331 Vösendorf SCS
Tel. 0222/679120

Niederlassung Graz
Lazarettgasse 36, Gürtelturm
A-8020 Graz
Tel. 03 16/915380

Niederlassung Wels
Grünbachstraße 2
A-4600 Wels
Tel. 07242/83630

England

Wersi-Organs & Pianos
14-15 Royal Oak Centre
Purley, Surrey
GB-CR 2 2 BG
Tel. 01-668-9733

Norway

TERCO Instrument A/S
Verpet Industrifelt
Postboks 98
N-1540 Vestby
Tel. (02) 95 10 00

Sweden

TERCO Instrument AB
Box 2004
S-12702 Skärholmen
Tel. 08-880200
Telex 17776 TERCO S

Denmark

K.S.M. Electronic
Industrihegnet 6, Tune
DK-4000 Roskilde
Tel. (02) 139720

France

SALVENCO S.a.r.l.
Rue de la Jauge, 3
F-67600 Sélestat
Tel. 88-922156
Central Orgues
17, avenue Trudaine
F-75009 Paris
Tel. (1) 8787223

Spain

Bergol Ingenieros
Apartado 46
Vera de Bidasoa/Navarra
Tel. 948/640414

South Africa

Hobbykits Pty. Ltd.
P. O. Box 13410
Sinoville Pta.
0129 R.S.A.
Tel. 012/573194

Australia

Defi-Agencies
9, Florence Street
Burwood, Vic. 3125
Tel. 03/2883034

USA

Wersi Electronics, Inc.
1720 Hempstead Road
P.O. Box 5318
Lancaster, PA 17601
Phone (717) 299-4327
TWX (010) 672-0540
Wersi Organs & Kits
14104 E. Firestone Blvd.
Santa Fe Springs, CA 90670
Phone (213) 802-2891, (714) 739-4909

Local Importer

normsorgans.com