THE DITCHBURN ORGANIZATION LIMITED

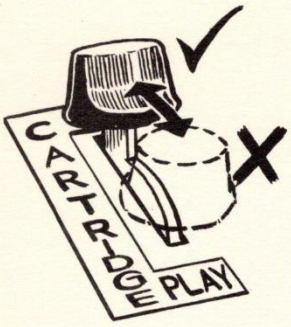
Music Maker

SERVICE MANUAL

ALL YOU NEED TO KNOW ABOUT MUSICMAKER

*THIS IS IMPORTANT!

NEVER leave the tape cartridge in the 'PLAY' position when your MUSIC MAKER is not in use.



THIS MUST BE DONE BEFORE SWITCHING THE UNIT OFF. EITHER AT THE SWITCH OR AT THE MAINS.

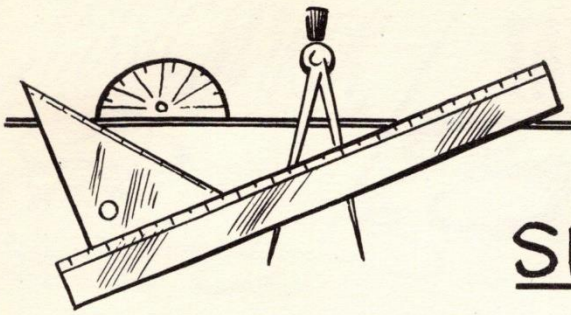
Failure to carry out this simple procedure causes undue pressure on the pinch wheel, resulting in loss of quality, poor reproduction and eventual need to replace the pinch wheel.

Adherance to this simple rule will ensure that you gain maximum trouble-free performance from your MUSIC MAKER.

Thank you ...

THE DITCHBURN ORGANISATION
DITCHBURN VENDING MACHINES INC.
1826 NORTH ELSTON AVENUE
ILLINOIS 60622

TEL. 486-4460



MUSIC MAKER

TECHNICAL SPECIFICATIONS

OUTPUT :

1) 70-volt line, for loudspeaker load of 4 watts max.
2) Un-balanced output of approx. 0 db level to feed additional amplifiers if required, impedance 680 ohms.
3) Built-in monitor loudspeaker, with switch on rear panel.

INPUTS :

1) From 4-track tape cartridge.
2) Microphone, for use with low/medium impedance dynamic micro-phone.
3) Auxilliary, for use with phono. radio, or other external source. Requires approx. 50 mV into an impedance of 90k-ohm; may be modified by use of external pads etc.

The desired tape track, or other input, is selected by means of a 6-position switch. Separate volume controls are provided for microphone and music, thus enabling these to be pre-set.

CIRCUITRY :

Solid state amplifiers employing a complementary symmetrical output stage, and incorporating the latest A.C. and D.C. feed-back techniques.

TAPE CARTRIDGE :

Contains long-life lubricated mylar tape, recorded on 4 tracks at 1 7/8th i.p.s , to provide approximately 8 hour programme.

The cartridge is locked in position by a simple lever, which also operates the Power Switch.

POWER SUPPLY : 115 Volts, 60 c/s approx. 40 Watts.

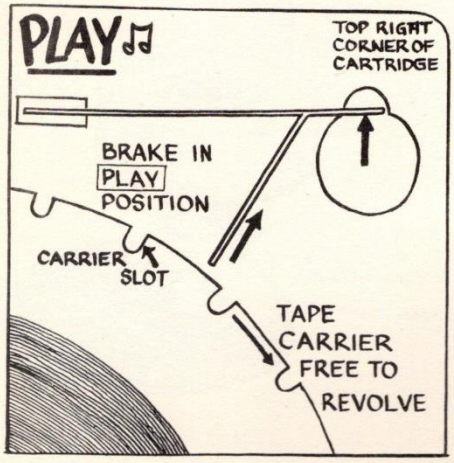
DIMENSIONS : 12½" W, 12¾" D, 7" H.

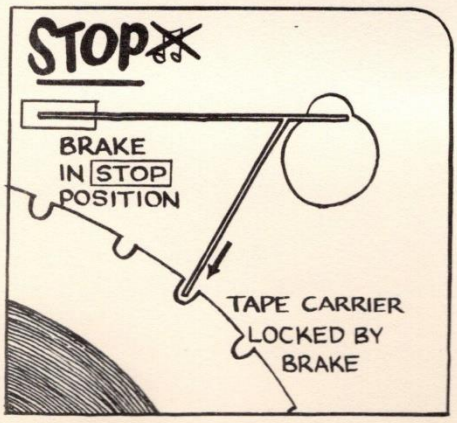
WEIGHT : 18 lb. approx.

MUSIC MAKER / TAPE Spillage

This is occasionally caused by incorrect operation of the brake wire. (Refer to sketch). The function of this wire is to prevent the tape carrier spool from rotating and allowing the tape to spill when ever the cartridge is not in use on a machine.

The nose of the brake-wire should not be so exact a fit into any of the tape carrier spool slots that it becomes jammed and cannot easily be disengaged when the cartridge is inserted into the machine.

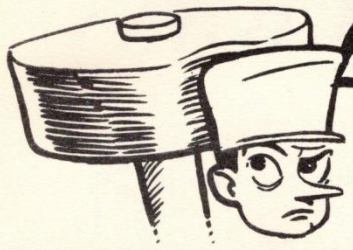




You may first check this operation manually. Since the only purpose of the brake wire is to prevent the spool from rotating, it does not matter if a 'nose' is too large to fit into a slot, provided sufficient tension is present to lock the spool. Make sure that the wire nose is not riding on top of the spool, that it is free to move under its retaining plate and the wire anchorage has not allowed the wire to work free and alter its position relative to the carrier spool slot. (Refer to sketch)

It sometimes happens that with rough usage the small circlip retaining the small nylon bobbin becomes disengaged or that the graphite rod which is normally fastened to the spool breaks. If it is suspected that these parts are loose in the cartridge return it to the Factory.

The purpose of this information is to help you to make a visual check on the efficient operation of a cartridge. If you detect or suspect inefficient operation do not attempt to rectify the trouble but return the cartridge with a brief note of your observation.

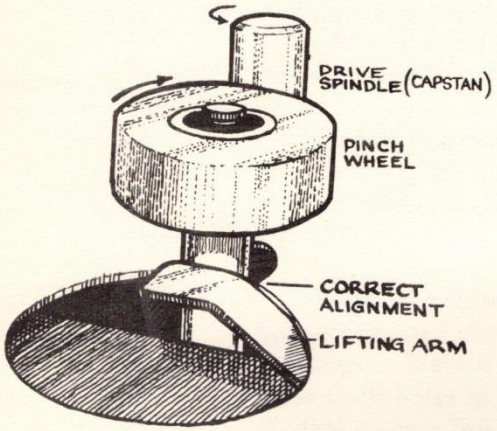


NEOPRENE
PRESSURE WHEEL

Where difficulty is encountered in engaging the tape cartridge on Music Maker Equipment:

1) The pinch wheel lifting arm should operate as shown.

If this is not so, the lever may be twisted to eliminate the gap between it and the pinch wheel spindle.



This must be adjusted to give (approx.) 1/32" identation of the pressure wheel on the capstan shaft.

Too little pressure will give :

1) Tape Slipping
2) WOW

Too much pressure will give :

3) Slow running.
4) Premature failure to drive belts
5) WOW

Make sure the pressure wheel and the capstan shaft are clean. Do NOT use oil on pressure wheel bearings. There is sufficient oil in the "Oilite" bearings.

PINCH WHEEL & MOTOR

Remember, too little pressure will give you: 1) Tape Slipping, 2) 'WOW'. ..... too much pressure will give you : 3) Slow Running, 4) premature failure of drive belts, 5) 'Wow'.

A simple check of pinch wheel pressure is, after having pulled the cartridge lever fully on, gradually to disengage the cartridge lever. If more than a slight increase in pitch or speed of the tape is noted it is likely that the pinch wheel pressure is set incorrectly and an adjustment should be made.

Motors :

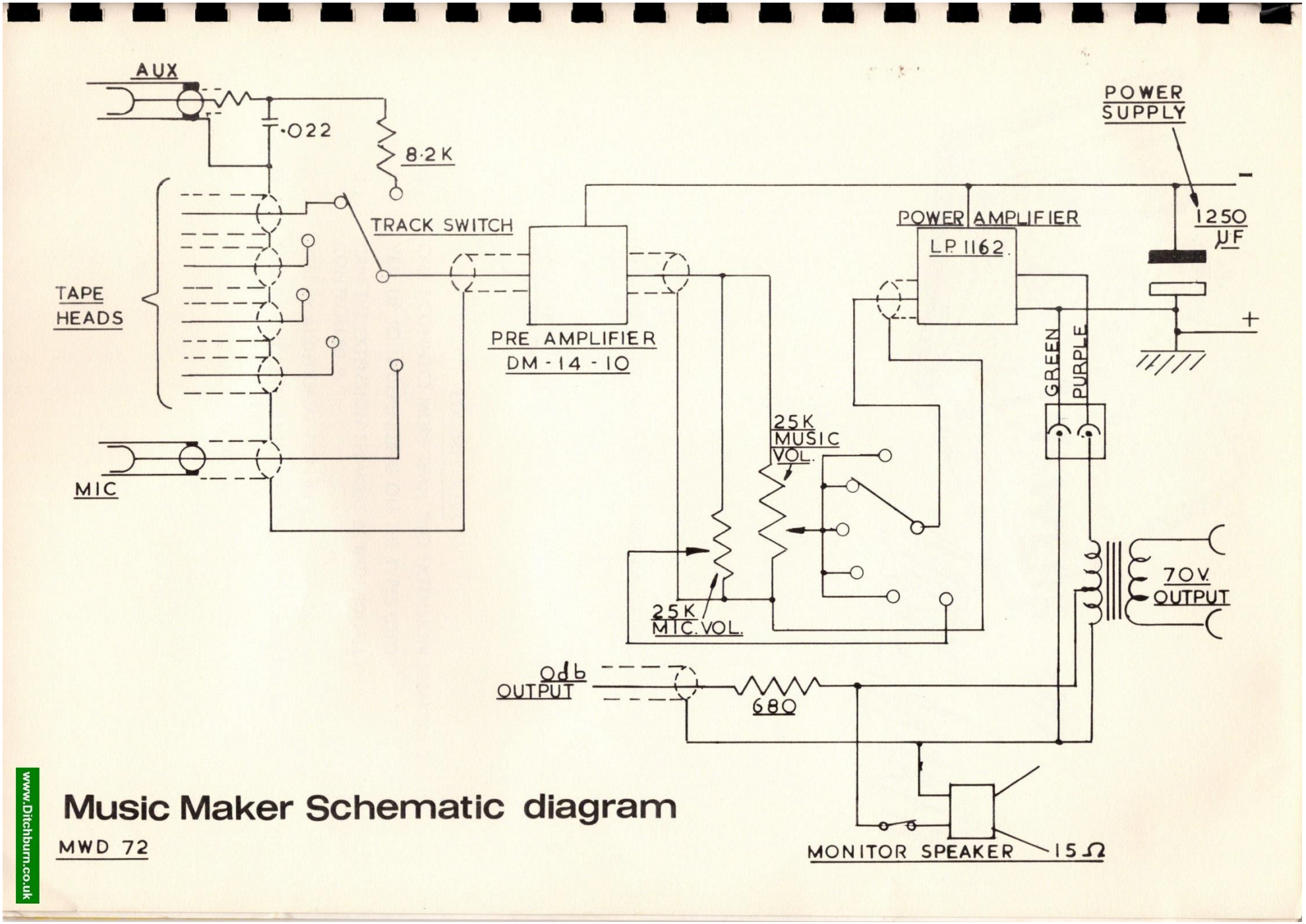
A lot has been done by the Development Department to improve motor performance, but you can help to alleviate problems that still exist. For example, don't use 3 in 1 oil!

For silent running, motor bearings must be a precise fit with minimum clearance. As with a good engine, bearings must be run in before full performance can be achieved, and as with a car it is often advisable to remove the by-products of this action by changing the oil, after which many hours of trouble free running can be expected.

The bearings are known as self-aligning. After stripping and re-assembling give the motor a sharp tap and the bearings will automatically re-align. A motor with mis-aligned bearings will normally become freer after receiving the corrective tap.

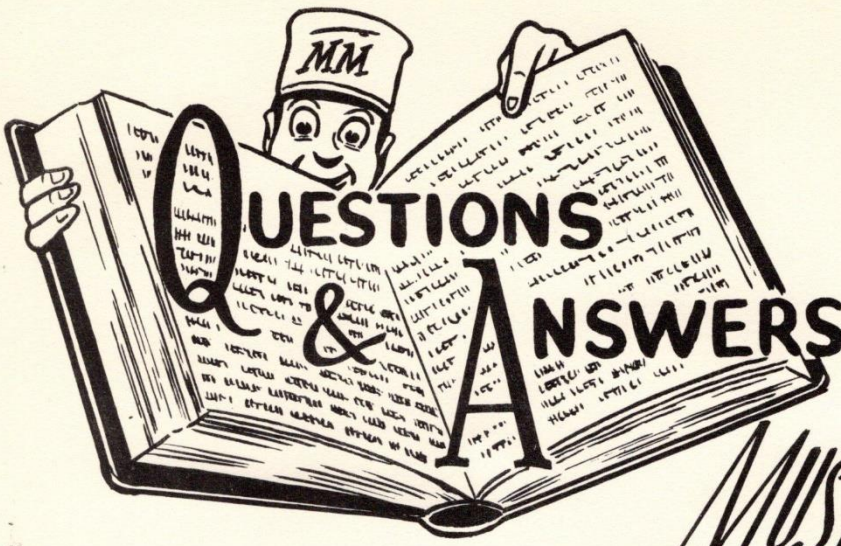
The small bronze bush which forms the bearing is in actual fact constructed of small particles of metal which form a kind of sponge. There is normally a sufficient reservoir of oil in these small holes to allow the bearing to operate for upwards of 2000 hours. This is only true if the correct oil, No. 29 Tellus, is used. 3 in 1 oil evaporates very rapidly. It is also obvious that any attempt to open up the hole in the bearing with a reamer or drill will close off many of the small holes which supply the oil to the wearing surface and the motor will seize.

If you encounter a faulty or slow-running motor 1) Check the mains voltage. 2) Check all other components are satisfactory especially pinch wheel pressure and bearings 3) Strip and clean the bearings 4) Re-oil bearings and felt washers 5) Examine the bottom bearing and make sure that no damage has been done and that the bearing retaining clips are not proud of the bearing surface.



Music Maker Schematic diagram

MWD 72



Q : CAN THE MUSICMAKER BE USED WITH AN EXTERNAL AMPLIFIER ?

A : YES

Q : CAN THE INTERNAL SPEAKER OF THE MUSICMAKER BE SWITCHED OFF ?

A : YES

LOUDSPEAKERS

Q : CAN I CONNECT MORE THAN TWO EXTENSION SPEAKERS ?

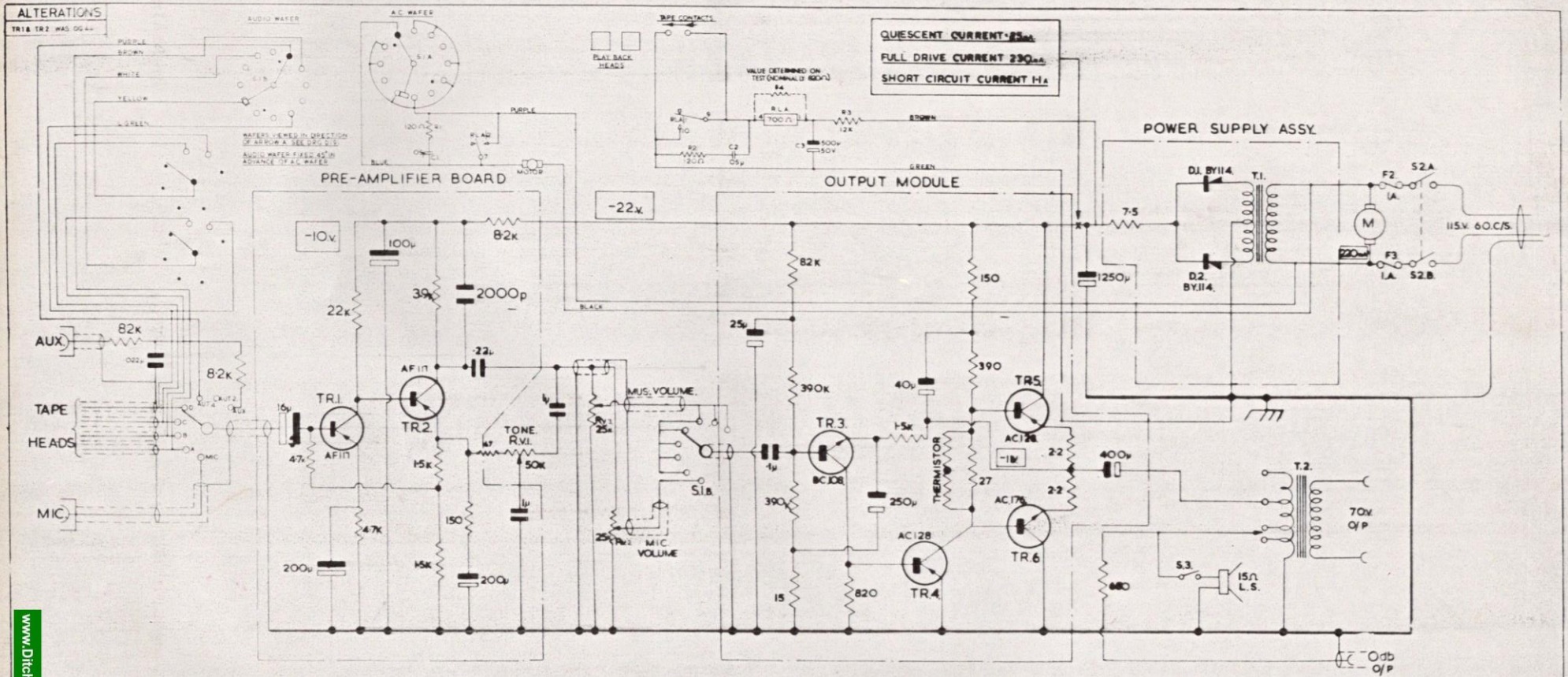
A : YES, UP TO 16 DEPENDING ON THE TYPES USED.

Q : CAN THE EXTENSION SPEAKERS BE INDIVIDUALLY CONTROLLED ?

A : YES, BY ADDITIONAL CONTROLS.

Q : SHOULD THE EXTENSION SPEAKERS BE CONNECTED IN SERIES OR PARALLEL ?

A : CONNECTED IN PARALLEL.



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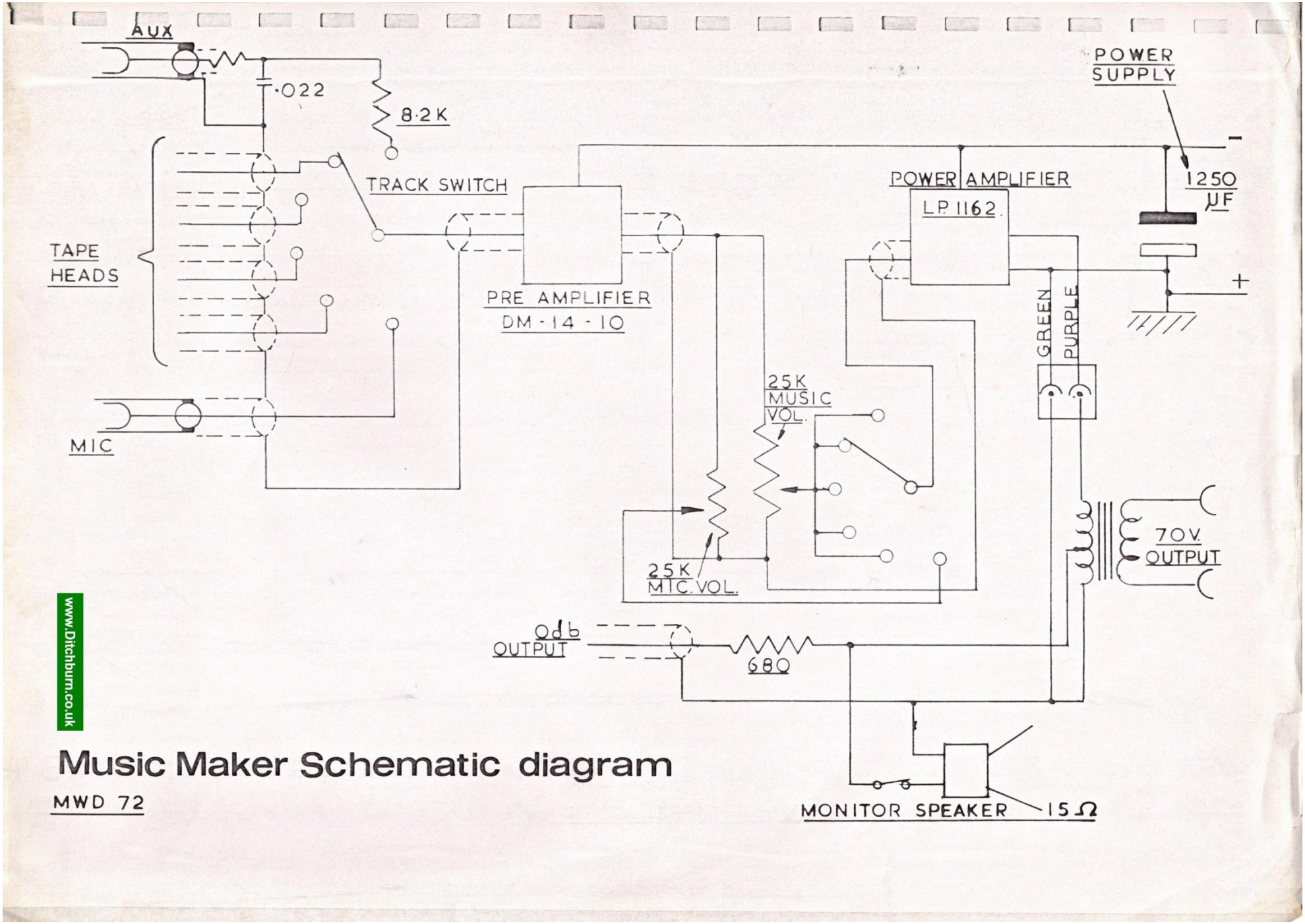
CHICAGO ILLINOIS 60622.

MODEL 303 MUSIC MAKER – SCHEMATIC DIAGRAM

DRG. No. MWD. 75



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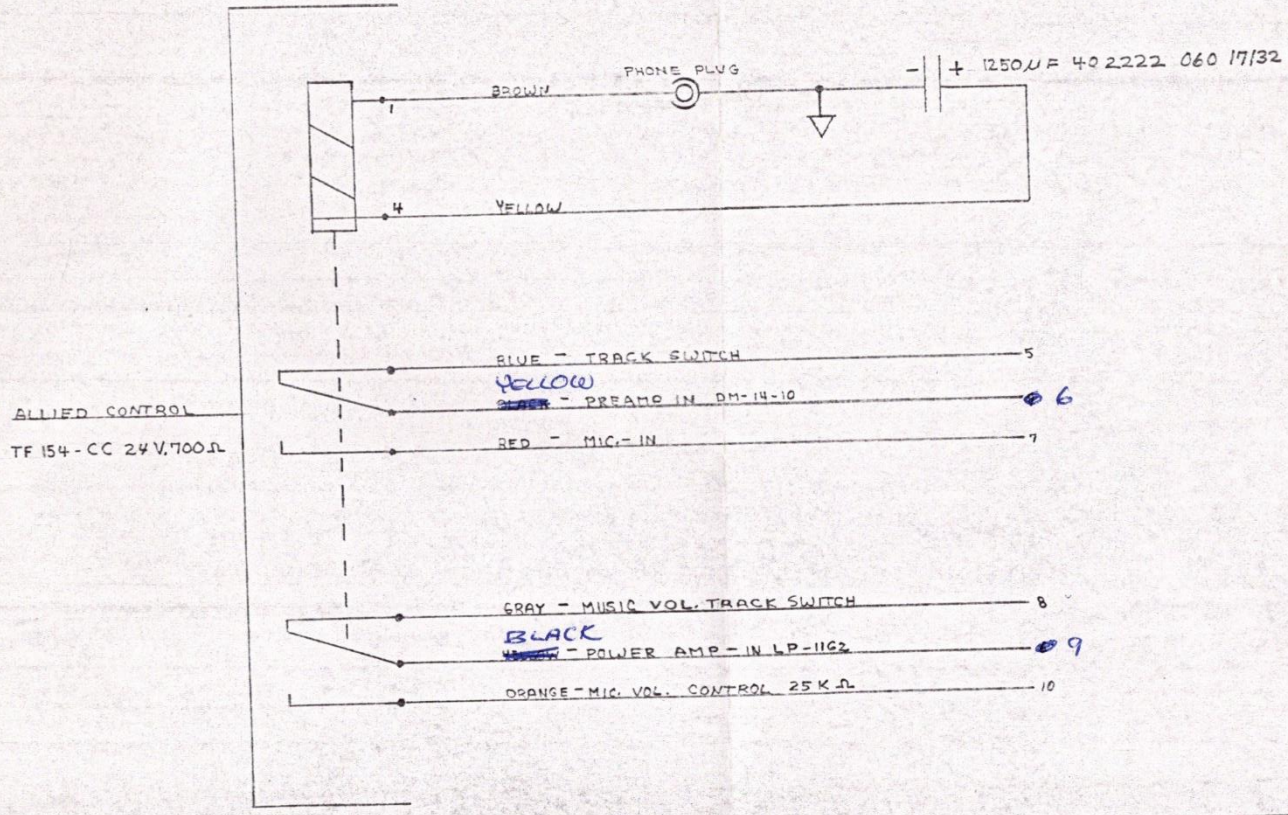
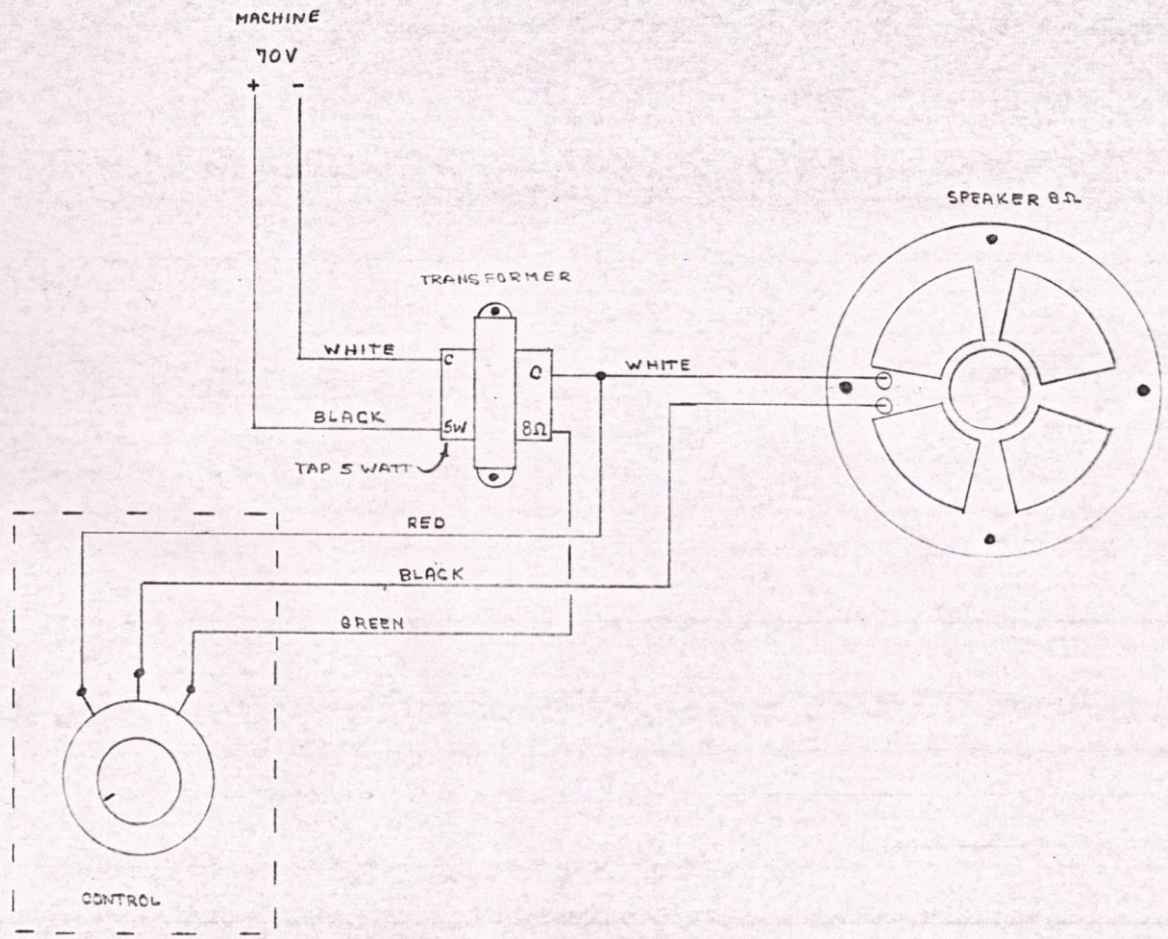


FOR REMOTE OPERATION OF A LOW/Z MIC.

Music Maker
of
KENTUCKY
Route No. 3, Huffman Mill Rd., Lexington, Ky. 40505 · Phone 299-9214



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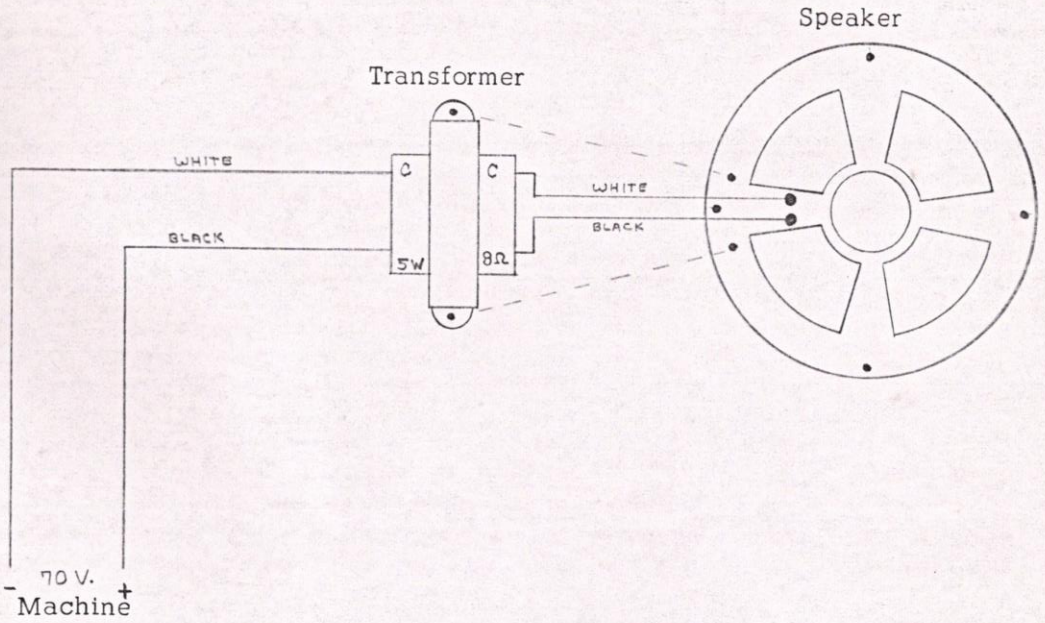

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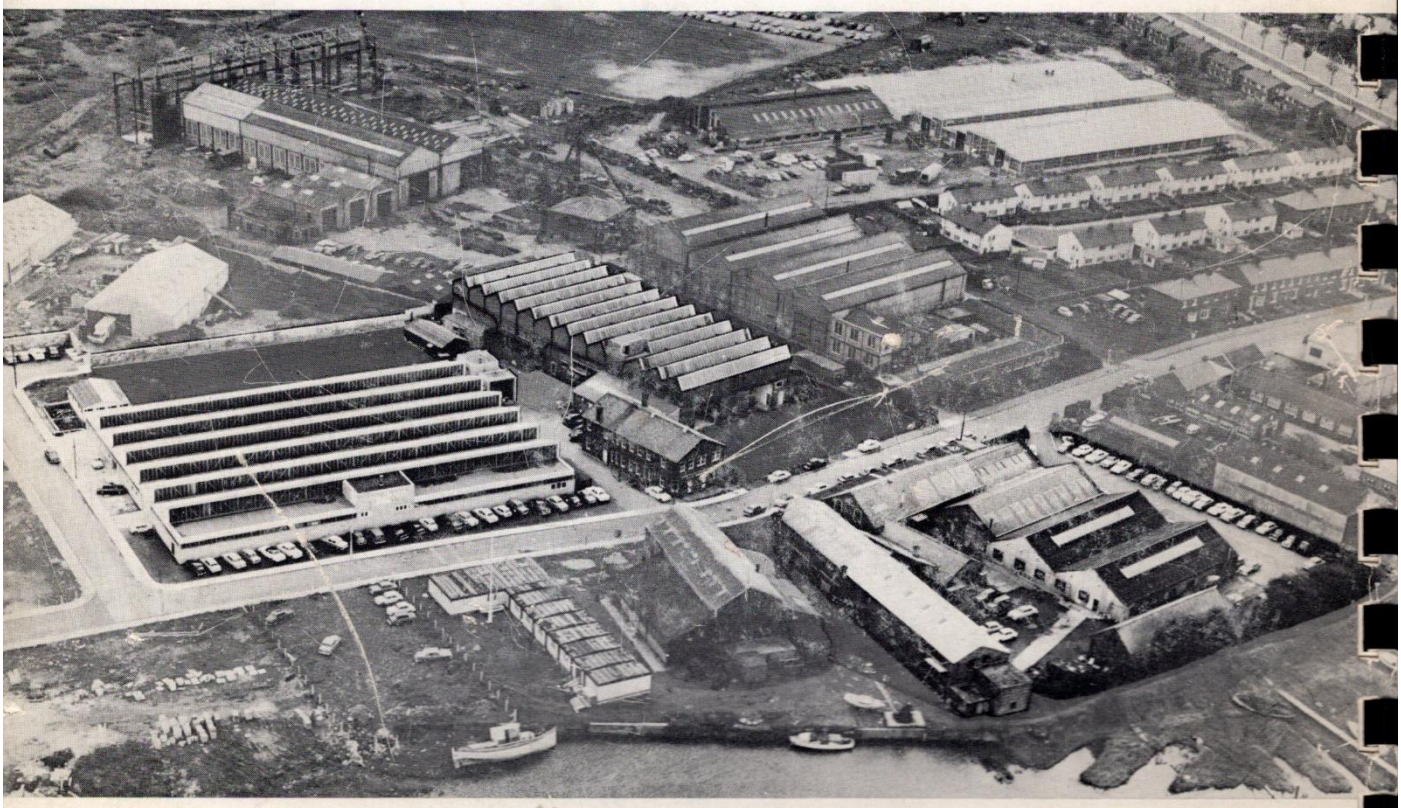
The Ditchburn Organization Ltd.,

LYTHAM, ENGLAND

the home of

Music Maker



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